Jayco

Where Tradition
and Innovation
Meet...

Conventional Travel Trailer and Fifth-Wheel Travel Trailer

JAY FLIGHT

Cunningham Campers, Inc.

5201 Highway 62
Jeffersonville, IN 47130

1-812-284-0276 Option 3

Welcome to our Used Jayco Owners' Group

We Know Jayco Parts!

As a group member you receive **10% OFF** any order for parts, not already on sale. Just call us **with your VIN #** and we will find what you need and ship it directly from Jayco to your front door.

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1-812-284-0276

Use Option 3 For Parts

http://parts.cunninghamcampers.com/jaycoclub

Cunningham's – Selling & Servicing Jayco RV's for OVER 38 Years!

WARNING: Read all instructions in manual before using your camper.

This manual has been provided by Jayco, Inc. for the sole purpose of providing instructions concerning the operation and maintenance of this vehicle and its components. Nothing in this manual creates any warranty, either expressed or implied. The only warranty offered by Jayco, Inc. is as set forth in the limited warranty applicable to this vehicle.

The owner's failure to provide required service and/or maintenance could result in the loss of warranty. The owner should review Jayco's limited warranty and the limited warranties of all other manufacturers offering them that are applicable to this vehicle.

Instructions are included in the manual for operating various components which are optional on some vehicles. In addition, the owner should refer to individual manufacturer's operating instructions contained in the owner's packet.

WARNING: Review the compatibility of your tow vehicle with the trailer you will be towing. You should not exceed the gross vehicle weight rating of the trailer (GVWR). Know your loaded hitch weight and select a hitch that is adequate for that weight. You, as the owner, are responsible for the safety and compatibility of your tow vehicle and trailer selections. Consult your hitch and tow vehicle manufacturers with any questions before you tow your trailer. You are responsible for the maintenance of your tow vehicle and trailer. Do not exceed the tow or cargo capacity of your tow vehicle, and remember that the gross combined vehicle weight rating (GCVWR) relates to towing capacity and does not necessarily indicate braking capacity. Do not overload your trailer with additions, cargo, or tank fluids to exceed the GVWR of the trailer. Do not load your trailer so that it is unbalanced from front to rear or from side to side. You should clearly understand how your particular tow vehicle capacities are calculated. Make sure your tow vehicle is mechanically sound for your intended usage and pay particular attention to suspension components, tires and tire pressure. We recommend you use antisway devices and weight distributing hitches with all Jayco towable products (excluding fifth-wheels, which use a different type of hitch). Many states have lower speed limit requirements for tow vehicle/trailer combinations. Obey all traffic laws and use your seatbelts at all times. We recommend that you do not exceed 55 MPH when towing a trailer. Consult an expert for specific driver education when towing a trailer. There are private RV driving schools and some RV clubs offer driving seminars as part of their club activities. Recreation vehicle publications and the Internet can be a source of information regarding RV driver education as well as many other topics to help you learn to safely use your recreation vehicle.

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PART # 0500695

YOUR NEW JAYCO IS YOUR PASSPORT TO A WHOLE WORLD OF NEW FRIENDS CAMPING FUN AND TRAVEL ADVENTURE WHEN YOU JOIN THE THOUSANDS OF JAYCO FAMILIES WHO MAKE UP THE . . .

INTERNATIONAL JAYCO JAFARI TRAVEL CLUB

You will find us enjoying the friendship and fellowship of JAFARI CAMPING as we join our local area FLIGHTS at hundreds of weekend camp-outs all over North America each month . . .

WE'RE THE FAMILIES OF JAYCO!

There are special STATE, REGIONAL and INTERNATIONAL RALLIES where you can join with your fellow JAFARIANS and their flights to enjoy a special kind of togetherness . . . fun, games, and entertainment provide memories to last a lifetime.

And . . . how about the exotic surroundings of NEW ORLEANS, the sounds and color of NASHVILLE and the GRAND OLE OPRY, the mystery of MEXICO., the roar and rush of the INDIANAPOLIS 500, the quiet surroundings of the CANADIAN ROCKIES, the color of the SMOKY MOUNTAINS in the Fall. These and many other adventures can be yours when you join . . .

THE INTERNATIONAL JAYCO JAFARI TRAVEL CLUB

Fill in the blanks on the reverse side, cut along dotted line and mail along with a check to:

INTERNATIONAL JAYCO JAFARI

P.O. Box 192

Osceola, IN 46561-0192

ATTN: Membership Director

Yes, it's for everyone with a JAYCO; young couples just starting out, families spending quality time together, the young at heart expanding their life experiences. Whether you belong to another camping club, have always traveled alone, or are just starting, don't miss out on one of the most priceless benefits of being an RV family . . . meet new friends and spend a bit of your camping life with some of the finest people you will ever have the opportunity to share a campfire or treasure a moment of golden living with . . Fifth-Wheel Travel Trailer . . . Mini-Motorhome. . . Conventional Travel Trailer . . . Folding Camping Trailer . . . it doesn't matter, if you are a JAYCO FAMILY, then you are eligible to become a JAFARI MEMBER.

. . . YOU WILL NEVER BE SORRY YOU MADE THE DECISION

In addition to the special International decals for your unit, distinctive patches, the HITCH newsletter with schedules of upcoming events and activities, your membership entitles you to the following special benefits: MEMBERSHIP ROSTER containing the names and addresses of current members of the club. REGISTERED KEY RING, so if your keys are lost, they can be returned to the International Office and then returned to you. DISCOUNT CARDS for several national theme parks including, Sea World, King's Dominion, Silver Dollar City, Adventureland Park and Six Flags. DISCOUNT PRICES on Trailer Life and Motorhome camping magazines. SPECIAL PRICES on Wheeler's Guide, Woodall's Campground Directory and the Rand McNally road atlas. DISCOUNT PRESCRIPTION SERVICE. CAR RENTAL DISCOUNTS. PLUS, the joy of meeting new friends and enjoying Jaytrek Adventures around the country. Start with the first phase of your camping life . . just complete the application and forward it to the JAFARI INTERNATIONAL TRAVEL CLUB OFFICE.

WELCOME TO THE JAFARI FAMILY!

Jayco

Jafari INTERNATIONAL TRAVEL CLUB

TO: Membership Director, International Jayco Jafari

Please enroll us as members in the International ... We're ready to roll to where the "friends we just haven't met yet" have the coffee on the fire and are waiting for us to arrive: We are ...

Name:_____ Spouse: _____

Address:_____ Phone: _____

City:_____ State:_____ Zip: _____

Ages of Children at Home:_____

Our JAYCO is a:_____ Our Dealer_____
(type & size)

Membership Dues: (One year rate $20.00)

Two years: $35.00 Amount enclosed. $_____

Three years: $50.00 Check #:_____

_____

(signature) (date)

Table of Contents

Chapter 1 Introduction To RV Ownership 1
Welcome 1
Safety Considerations 2
Reporting Safety Defects 2
Safety in Using LP Gas 2
Electrical System Safety 3
Safety When Emergency Stopping 3
Additional Safety Considerations 3
Insurance 4
Extended Use 4
Cold Weather Use 4
Condensation 4
Chapter 2 Obtaining Service 5
Warranty registration 5
Service Procedures 7
Basic Service Procedures 7
Dealer 8
Factory 8
Parts 8
Owner's Responsibility 8
Chapter 3 Use Of Your Travel Trailer 9
Equipment 9
Tow Vehicle 9
Hitches 10
Hitch Height 11
Hookup 11
The Safety Chain 12
Hitches - Fifth-Wheel Travel Trailer 12
Hitch Height - Fifth-Wheel Travel Trailer 12
The Hitching Procedure - Fifth-Wheel Travel Trailer 13
Towing 13
Traveling 14
Weights and Cargo Capacity 14
Loading Cargo 16
Weighing Instructions 17
Tires 17
Inflation 18
Wheel Lugs 18
Brakes 18
Electric 18
Breakaway Switch 19
Setting Up Your Travel Trailer 20
Slideout Operation 20
Electric (Option) 21
Manual 21
Getting Connected 22
TV Antenna 22

Raising Antenna to Operating Position . . . 22
To Test System . . . 23
Lowering Antenna to Travel Position . . . 23
Maintenance . . . 23
Fire Extinguisher . . . 23
Inspection and Maintenance . . . 23
Chapter 4 The Systems . . . 25
Plumbing System . . . 25
City Water Connection . . . 25
Water Tank - Gravity Fill . . . 25
12 Volt DC Demand Pump . . . 26
Sanitizing and Filling the Potable Water System . . . 26
Faucets . . . 27
Bath and Shower . . . 27
Outside Shower (Option) . . . 27
Drainage . . . 28
Sanitation System . . . 29
Toilets . . . 29
Operating Instructions - Aqua Magic® 4 . . . 29
Maintenance . . . 29
Using Toilet and Tank System . . . 29
Vents . . . 30
Holding Tanks . . . 30
Sewage Tank Preparation . . . 30
Winterizing Travel Trailer . . . 32
Method 1 . . . 32
LP Fuel System . . . 32
LP Container . . . 33
Servicing and Filling LP Containers . . . 33
OPD Overfill Protection . . . 34
Main Supply Hose - Low Pressure . . . 36
Regulator . . . 36
Automatic Changeover Regulator . . . 37
Operation . . . 37
Checking for Leaks . . . 38
LP Gas Consumption . . . 38
LP Detector . . . 39
Operation . . . 39
Testing . . . 39
Alarm . . . 40
Malfunction Alarm . . . 40
Low Power Operation . . . 40
Maintenance . . . 40
Electrical System . . . 41
General . . . 41
Changes, Modifications and Additions . . . 41
120-Volt AC System . . . 41
Power Cord . . . 41

GFCI . . . 42
30-amp Service . . . 43
Consumption of 120-volt AC Power . . . 43
12-Volt DC System . . . 43
Converter . . . 44
Auxiliary Battery (Dealer Installed Option) . . . 44
Battery Isolator (For Tow Vehicle) . . . 45
Exterior Lights . . . 45
Porch Light . . . 45
Television Cable . . . 45
Fuse and Bulb Chart . . . 46
DC Fuse Panel Layout . . . 47
Brakes . . . 47
Chapter 5 Appliances . . . 48
General . . . 48
For Your Safety (Read Before Operating) . . . 48
Furnace . . . 49
Operating Instructions . . . 49
To Turn Off Gas to Appliance . . . 50
Maintenance . . . 50
Ducting and Return Air . . . 50
Range and oven operation . . . 50
Top Burner Operation . . . 51
Oven Operation . . . 53
Water heater . . . 55
Safety Information . . . 55
Operating Instructions . . . 56
Operating Instructions For Units With Electric Element . . . 57
Refrigerator . . . 60
About Your Refrigerator: . . . 60
Operating the Refrigerator Controls . . . 63
Air Conditioner . . . 64
Operation . . . 64
Monitor panel . . . 65
Operation . . . 65
Chapter 6 Care Of Body Components. . . . 66
Exterior Aluminum . . . 66
Exterior Roof . . . 66
Stone Guard . . . 67
ABS Plastics . . . 67
Frame . . . 67
Doors, Extrusions, Windows & Vents . . . 67
Furniture . . . 67
Cushions . . . 68
Bedspreads . . . 68
Window Treatments . . . 68
Shower Curtain and Liner . . . 68
Tire Covers - Vinyl (Option) . . . 68

Paneling . . . 69
Vinyl Floor . . . 69
Carpeting . . . 69
Countertop . . . 69
Hardware and Sink or Shower Fixtures . . . 69
Chapter 7 Maintenance/Storage . . . 70
Slideout . . . 70
TV Antenna . . . 71
Lubricating the Elevating Gear (Fig. 7-1) . . . 71
Lubricating the Bearing Surface (Fig. 7-2) . . . 71
Lubricating the Rubber Quad Ring (Fig. 7-3) . . . 71
Toilets . . . 71
Aqua Magic® 4 . . . 71
Storage . . . 72
LP Gas Bottles . . . 72
Furnace . . . 73
Refrigerator . . . 75
Refrigerator Care Checklist . . . 75
Defrosting . . . 75
Cleaning . . . 76
Door Sealing . . . 76
Refrigerator Maintenance Checklist . . . 77
Refrigerator Storage . . . 77
Refrigerator Maintenance . . . 77
Refrigerator Fuse Replacement . . . 78
Range and Oven . . . 78
Range and Oven Storage . . . 80
Water Heater . . . 80
Maintenance of Water Heater . . . 80
Draining and Storage of Water Heater . . . 81
Winterizing Water Heater . . . 81
Air Conditioner . . . 81
LP Gas Alarm . . . 82
Faucets . . . 82
Smoke Alarm . . . 83
Battery Replacement - Smoke Alarm . . . 83
Entrance Step . . . 84
Covering Nicks and Scratches . . . 84
Lubricating the Mechanism . . . 84
Mechanical Maintenance Chart . . . 85
Inspection Points for Sealing . . . 89
Conventional Travel Trailer . . . 89
Fifth-Wheel Travel Trailer . . . 90
Maintenance Checklist . . . 91
Towable Transferrable Limited Warranty . . . 94
Limited Warranty Transfer Application . . . 96

NOTES

NOTES

Chapter 1

INTRODUCTION TO RV OWNERSHIP

WELCOME

Thank you for purchasing your Jayco Recreation Vehicle and welcome to the world of recreation vehicle travel. Your purchase of a Jayco RV allows you to enter this unique world of camping and leisure in a grand style. **Your Jayco RV has been designed and engineered to offer you many comforts of home that will make your camping experience as enjoyable as possible. Jayco recreation vehicles are designed, constructed and intended to be used as temporary living quarters for recreational, camping and travel uses, all as defined in the bylaws of the Recreation Vehicle Industry Association. Our recreation vehicles are not intended for the hauling of cargo.**

This owner's manual was prepared to assist you in understanding the proper use and operation of various containment systems, servicing and maintenance of component parts, and explanation of your warranty protection. If you are a newcomer to RV travel, you will especially appreciate the suggestions and "shop talk" information to be found throughout this manual to help you obtain the most pleasure from the use of your vehicle.

The information in this manual reflects the most current available to us at the time of publication. If you find the components in your recreation vehicle vary significantly from what is described in this manual, please disregard that section and follow the instructions provided by that particular component manufacturer. You should carefully read and understand this owner's manual which is a supplement to various other instructions supplied by the manufacturers of separately warranted products.

Keep this owner's manual in your recreation vehicle for handy reference. Get to know your new vehicle and how it operates. You should carefully read and understand these instructions and information supplied by manufacturers of separately warranted products, since they contain important operating, safety, and maintenance instructions. If you have questions that are not adequately answered by this manual or other booklets, consult your dealer. If he cannot satisfactorily answer your questions, he will call our staff or refer you to us for help.

Every effort has been made to provide you with a safe, dependable product. Your vehicle complies with applicable requirements of Federal Motor Vehicle Safety Standards, State Regulations, Canadian Standards Associations (CSA) where applicable, and complies with requirements of ANSI Standard A119.2, the nationally recognized "Standard For Recreation Vehicles – Installation of Plumbing, Heating and Electrical Systems." The Recreation Vehicle Industry Association (RVIA) and Canadian Standards Association (CSA) periodically inspect our production line and assist us in maintaining strict compliance with installation and safety standards for those systems. **Your follow-up with periodic safety inspections and a program of preventive maintenance is important for the continuation of safe and trouble-free operation.**

Camping is a great way to relax and enjoy the outdoors with your friends and family. Please remember to tread lightly on our beautiful land and leave only your footprints so that others may enjoy nature as much as you did.

The Jayco Family
Jayco, Inc.

SAFETY CONSIDERATIONS

The terms NOTE, CAUTION and WARNING have specific meanings in this manual.

A **NOTE** provides additional information to make a step or procedure easier or clearer. Disregarding a NOTE could cause inconvenience, but would not be likely to cause damage or personal injury.

A **CAUTION** emphasizes areas where equipment damage could result. Disregarding a CAUTION could cause permanent mechanical damage. However, personal injury is unlikely.

A **WARNING** emphasizes areas where personal injury or even death could result from failure to follow instructions properly. Mechanical damage may also occur.

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash, injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Jayco, Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer or Jayco, Inc.

NHTSA	Customer Relations Dept.
U.S. Department of Transportation	Jayco Incorporated
Washington, D.C. 20590	P.O. Box 460, Middlebury, IN 46540
Phone: 1-800-424-9393	Phone: 1-877-825-4782 or 1-219-825-0608
Washington, D.C. Area: 368-0123	Business Hours: 8:00-5:00 Mon.–Fri. EST

You can also obtain other information about motor vehicle safety from the Hotline.

Safety in Using LP Gas

You should check for leaks at the connections on the LP gas system soon after purchase and initial filling of LP tanks, and continued periodic checks of the system are recommended. Your vehicle was manufactured to provide you with full access to all gas line connections. Leaks can be found with a soapy water solution, which **does not contain ammonia or chlorine**, applied to the outside of the gas piping connections: the soap will bubble at the leak. **DO NOT USE FLAME OR LIGHTED MATCHES TO TEST FOR LEAKS**. Usually tightening of connections will close leaks. If not, ask an authorized dealer's service department to make the necessary tests and repairs.

Although the manufacturer and dealer have performed tests for leakage, this check is recommended due to the vibration encountered during travel.

As LP gas is heavier than air, leaking gas tends to flow to low places which will sometimes pocket in low areas, such as the travel trailer floor. LP gas can usually be detected by an identifiable odor similar to onions or garlic. Never light a match or allow any open flame in the presence of leaking gas.

It is very important to have the LP gas turned off during refueling of tow vehicles. Some states prohibit gas appliances to be operated during travel, especially in underground tunnels.

Never allow gas containers to be filled above the liquid capacity indicated on the container. If a container is overfilled, liquid gas may flow through the regulator causing it to freeze and/or

introduce a dangerous excessive gas pressure into the lines. In addition, an overfilled container placed in hot sunlight may expel excess gas through the relief valve and be susceptible to ignition by any nearby open flame.

Electrical System Safety

Circuit breakers and fuses are installed to protect electrical circuits from overloading. Do not make unauthorized changes to circuitry or add on fixed appliances yourself. If you wish to make changes, consult your dealer and he will assist you in obtaining a safe installation.

An approved power supply cord has been supplied with the vehicle. Always use this cord for hook-up to the 120-volt source. Note that the cord has a three pin plug, which provides proper grounding through the third (round) pin. Grounding is your personal protection from electrical shock.

WARNING: Do not use an adapter, cheater, or extension cord that will break the continuity of the grounding circuit connected to the third pin. NEVER remove the grounding pin to connect a non-grounded, two-prong receptacle. Any deviation from this will potentially cause a fire from overheating.

Safety When Emergency Stopping

Pull off the roadway as far as possible for emergency situations and turn on the vehicular hazard warning flashers. If necessary, display your road flags and/or reflective triangular highway warning devices.

NOTE: Always carry road flags and/or reflective triangular highway warning devices to be displayed when necessary.

Additional Safety Considerations

WARNING: For traveling safety, it is extremely important to read and understand the towing, hitching and loading cargo information provided in Chapter 3. If you do not understand the information provided, please consult your dealer or Jayco owner representative.

- Sanitize the fresh water supply system periodically (see sanitizing instructions).
- Prevent water connection fittings from coming in contact with the ground or drain hose to reduce chance of contamination.
- Enlist services of a qualified or certified RV technician to repair and maintain gas or electrical appliances.
- Always have a serviceable fire extinguisher placed in an easily accessible location.
- Ensure that tires are in good condition and properly inflated. Proper inflation should be monitored closely. Neglecting to do so could result in overheating of a tire, which could result in a blowout.
- Check and tighten wheel lugs after the first 10 miles, 25 miles and then again after 50 miles. Refer to manufacturer's owner's manual. Check periodically thereafter.
- Check brakes in a safe area - not while traveling a busy highway.

- Always block trailer wheels solidly before unhitching.
- Before leaving a camp area with a trailer in tow, insure that the safety pin or locking lever is seated, breakaway wire is attached to tow vehicle, the jack is raised so that it cannot touch the ground, the dolly wheel removed, 120-volt electrical cord properly stored, safety chains are connected, and all interior lights are off.
- Observe the warning labels attached to your vehicle concerning LP gas, water, electricity and loading.
- Observe the maintenance chart in Chapter 7 related to your respective unit.

INSURANCE

As with your automobile, it is important that you protect yourself and others with insurance coverages for personal liability, theft, collision, property damage, etc. Your dealer will assist you in obtaining appropriate insurance for your protection or you may check with the company which provides your automobile insurance.

EXTENDED USE

This travel trailer has been built for enjoyment in a recreational manner. It is not intended to be used as full-time living quarters.

CAUTION: Continuous living in your travel trailer could cause accelerated wear and damage to components.

COLD WEATHER USE

- Proper care should be taken with the fresh water and draining systems to avoid freezing problems. Consult your local dealer or RV supply house for additional material.
- Adequate gas and electrical supply is needed along with protection from possible freeze-ups on the gas regulator.
- During cold weather usage, ventilation or the addition of a dehumidifier may be required to reduce condensation. Reference "Condensation."

CONDENSATION

Condensation is a natural phenomenon. The amount of condensation will vary with the climate conditions, particularly the relative humidity. Condensation occurs because there is water vapor present in the air, which each of us adds by breathing, bathing and cooking. The water vapor collects where there is available air space, and when the temperature reaches the 'dew point' the water vapor in the air condenses and changes to liquid form. Most people have experienced a similar phenomenon when moisture forms on kitchen windows and bathroom mirrors during cool weather.

Proper ventilation and, if needed, the use of a dehumidifier will assist in controlling the condensation. Many RV and marine dealers carry small dehumidifiers especially sized for recreation use. Condensation causes dampness, mildew, staining and if allowed to continue at high levels, damage to the tent, paneling and wood structures.

Chapter 2

OBTAINING SERVICE

WARRANTY REGISTRATION

Warranty Registration and Customer Delivery Form

Jayco, Inc.
P.O. Box 460
903 South Main Street
Middlebury, Indiana 46540
(219) 825-0608

Dealer is to assure that this form is properly completed and returned to Jayco within ten (10) working days after delivery

OWNER'S NAME	DEALER'S NAME
ADDRESS	ADDRESS
CITY / STATE / ZIP CODE	CITY / STATE / ZIP CODE
DELIVERY DATE / PHONE NUMBER (DAYTIME) / /	*ODOMETER READING (MUST BE COMPLETED FOR MOTOR HOMES)*
JAYCO SERIAL NUMBER	CHASSIS VIN (VEHICLE I.D. NUMBER)

ALL ITEMS MUST BE MARKED OFF BY THE DEALER IN THE CUSTOMER'S PRESENCE INDICATING PERFORMANCE OR INSTRUCTION AS REQUIRED.
PLEASE MARK EACH ITEM OK OR NA (NOT APPLICABLE).

1. ELECTRICAL SYSTEM
   - ____ 110-Volt System
   - 12-Volt System
   - All Interior Lights/Recepts
   - ____ All Exterior Lights/Recepts
   - ____ Battery – Full Charge and Maintenance
   - ____ Converter Operation and Use
   - ____ Monitor Panel and Maintenance
   - ____ Operation and Maintenance of Slideout
   - ____ Phone and Cable TV
   - ____ Roof Air
   - ____ Radio/Cassette
   - ____ TV
   - ____ Microwave

___ 2. Folding Camper Set Up
   - ____ Complete Set Up and Closing Demonstration, Proper Leveling

3. LP GAS SYSTEM
   - ____ Location and Maintenance of LP Lines and Connections
   - Maintenance and Operation of Regulator
   - ____ Appliance, Refrigerator and Furnace Vents

4. Water/Plumbing Systems
   - ____ Water lines
   - Faucet(s)
   - Winterizing
   - ____ Water Intake/Drain lines
   - ____ Outside shower
   - ____ Shower
   - ____ Holding tank
   - ____ Toilet

___ 5. Appliances and Safety Equipment
   - ____ LP Gas Manometer Test (Check for leaks Repair if needed and retest) Set Gas Pressure At _____ IN. Water Column
   - ____ Furnace and Thermostat
   - ____ Range and Oven
   - ____ Water Heater and Bypass
   - ____ Coffee Maker
   - Refrigerator
   - ____ Tires - Correct size and inflate to sidewall pressure specs
   - Door Locks/Keys
   - ____ Wheel Lugs -- (Tighten to specs for Ft. LB Torque) Review Maintenance Tighten at 10, 25, 50 miles.

6. Running Gear
   - ____ Brake Adjustment and Maintenance
   - Bearing Lubrication and Maintenance
   - ____ Brake Wire Connections
   - ____ Hydraulic Brake Fluid and Maintenance
   - ____ A-Frame/Coupler Operation
   - ____ Operate and Lube Jacks

___ 7. GENERAL APPEARANCE
   - ____ Interior/Exterior Trim
   - ____ Exterior Finish
   - ____ Bumper, Steps, A-Frame, Rub Out and Touch Up as Needed
   - ____ Window and Roof Sealant

___ 8. Motorized Products
   - ____ Check all Fluid Levels
   - Check all Door and Window Locks
   - Chassis Prep as Recommended by the Manufacturer

DEALER INSTALLED OPTIONS (Dealer installed options are not covered under Jayco's limited warranties.)

_____ _____ _____ _____

OWNER/DEALER INSPECTION

1. Exterior and interior finish.
2. Operate all appliances and discuss maintenance.
3. Review operation, maintenance and safety of LP system.
4. Explain weight ratings, limitations and proper load distribution and maintenance.
5. Operate all fresh water and plumbing components including faucets, shower toilet and drain locations.
6. Review tow vehicle, hitch and sway control set-up test drive.
7. Complete review of owner manuals and highlight safety issues

I HAVE COMPLETED THE ABOVE INSPECTION ON THIS FAMILY CAMPING VEHICLE AND HAVE TAKEN A TEST DRIVE AT THE TIME OF PURCHASE. I NOTED:

_____

I RECEIVED A COPY OF THE JAYCO LIMITED WARRANTY BEFORE I PURCHASED THIS VEHICLE AND I UNDERSTAND THAT IT IS DESIGNED TO BE USED ONLY FOR RECREATIONAL CAMPING AND TRAVEL.

I AGREE TO THE TERMS ON THE REVERSE SIDE, AND UNDERSTAND THAT I WILL BE REQUIRED TO ARBITRATE ALL MY CLAIMS CONCERNING MY RECREATIONAL VEHICLE RATHER THAN GOING TO COURT.

THE PURCHASER HAS INSPECTED OR BEEN GIVEN THE OPPORTUNITY TO INSPECT THE VEHICLE AND TAKE THE TEST DRIVE, SUPPLIED THE INFORMATION ABOUT HIS/HER NAME AND ADDRESS, BEEN GIVEN THE OPPORTUNITY TO MAKE NOTATIONS IN THE SPACE PROVIDED AND OBSERVED OR RECEIVED SATISFACTORY EXPLANATIONS ABOUT ALL ITEMS LISTED ABOVE.

DATE PURCHASER'S SIGNATURE DEALER'S SIGNATURE

_____ _____ _____

White Copy: Jayco Canary Copy: Dealer Pink Copy: Customer

INFORMAL DISPUTE RESOLUTION AGREEMENT

I am entitled to receive a copy of this Agreement, and I may review it with my attorney before signing. I and anyone making claims on my behalf, or through me, shall submit any and all claims I may have in connection with my recreational vehicle (RV) against any retail dealer, manufacturer, or supplier of component parts, to binding arbitration under the federal Arbitration Act, 9 U.S.C. § 1-14, to the extent permissible under federal law. I agree that if I have a claim relating to my RV, I will allow the dealer and Jayco to inspect it and make necessary repairs. If my claim is not then satisfied, I will notify Jayco and binding arbitration proceedings will be held after I have paid an initial fee of $125 to the American Arbitration Association and I cannot pursue my claim in court or in any administrative proceeding. Arbitration will be administrated by the America Arbitration Association (AAA), pursuant to its Commercial Arbitration Rules, unless and until Jayco designates a different administrator, in which event a notice will be mailed to your last known address. If my claim is less than $10,000, Jayco will pay the initiation fee and arbitrator's fees in excess of $125, and the arbitrator shall not award damages in excess of $10,000. If my claim exceeds that amount or is not specified, I will pay one-half of the fees and costs in excess of $125. I, the dealer, and Jayco will each pay their own costs and expenses in connection with the arbitration hearing. The claim will be heard by a single arbitrator, and will be held thirty (30) days after the claim is filed, unless all parties agree to a later date. The arbitrator shall be selected from a panel named by the AAA, pursuant to its rules. The arbitrator shall be permitted only to award actual damages for financial loss, and shall not award damages for personal injury (or mental anguish, or other intangible claims), or punitive damages. Statutes of limitation, which would apply to a court proceeding for my claim, will apply to commencement of arbitration proceedings. If I default on any obligation to a lender in connection with my RV, my lender may exercise all of its rights without regard to this agreement. If I file a claim in court without having first complied with this agreement, I will be required to pay all fees, costs, and expenses, including attorneys' fees, for dismissal or referral to arbitration. This agreement will apply to me, my heirs and assigns, and anyone who purchases or leases my RV from me or operates or occupies it with my permission or without objection by me. Nothing in this agreement enlarges my rights or gives me any rights or claims I would not otherwise have. ***FOR INFORMATION ABOUT HOW TO FILE A CLAIM OR ABOUT THE ARBITRATION PROGRAM, CALL JAYCO AT 219-825-0608, OR THE AMERICAN ARBITRATION ASSOCIATION AT 800-778-7879.***

SERVICE PROCEDURES

Basic Service Procedures

We are interested in your satisfaction. Only by having your complete confidence and satisfaction with our product and its service can we assure our continued success as manufacturers of recreation vehicles. We have found that continuing a pleasant and effective relationship through our dealers is equally as important as maintaining the technical excellence of our product. Your authorized dealer will cordially assist you in providing service maintenance, selection of options and instructions concerning the operation of your vehicle.

Should you have a problem with service, please follow these instructions in sequence.

1. Contact your selling dealer's service department for an appointment. Describe to the best of your knowledge the nature of the problem.
2. Contact the owner or General Manager of the dealership should the initial attempt fail with the service department.
3. If further assistance is needed contact:

Customer Relations Dept.
Jayco Incorporated
P.O. Box 460
Middlebury, IN 46540
Phone: 1-877-825-4782 or 1-219-825-0608
Business Hours: Monday - Friday 8:00 - 5:00 EST

Give all the above information as requested along with the serial number of the unit in question and we will make every attempt to resolve your problem.

If you are traveling and are unable to locate an authorized Jayco dealer, or an authorized dealer for the component needing service, please call our customer service office at 1-877-825-4782 or 1-219-825-0608 or contact your selling dealer for assistance.

NOTE: Service at a non-authorized Jayco dealer should have prior authorization. You will be asked to return any mechanical parts replaced before reimbursement consideration is made. Unauthorized or improper repairs may void the warranty on that component.

Please keep your owner's manual, your copy of your warranty registration form and any other related papers in your RV.

Please bear in mind that most problems arise from misunderstandings concerning warranty coverage and service. In most instances, you will be referred to the dealer level and problems will be resolved with the dealer's facilities and personnel.

CALIFORNIA LEMON LAW NOTICE: If you have determined that your vehicle has non-conformities under the California Lemon Law, you must provide written notice of the claimed defects directly to Jayco, Middlebury, Indiana at the address for warranty service, and permit Jayco to perform a final repair attempt.

Dealer

Your authorized Jayco dealer has inspected and serviced your new Jayco RV He is authorized to service and maintain your travel trailer as needed. All warranty repairs are to be performed by the selling dealer unless Jayco gives prior approval.

Some RV dealers may be authorized service centers for certain manufacturers of products warranted separately. Check with your dealer before contacting others to reduce delays. If your Jayco dealer is not an authorized service center for the product in question, he can assist you in obtaining authorized service.

Factory

A factory service department is operated at our Middlebury, Indiana, manufacturing facility. Should your Jayco RV be in need of repairs and your dealer recommends that the factory make the necessary repairs, it may be returned to our plant upon following these procedures:

1. You or your dealer must make an appointment prior to returning it to the factory service department.
2. All transportation costs are the responsibility of the owner. You may need to arrange for alternative accommodations for some types of repairs. Please be prepared accordingly.

Parts

Parts are available at most Jayco dealerships or your dealer can order parts for you as needed. Should you be unable to find a dealer in your local area, contact our Customer Service Department at 1-877-825-4782 or 1-219-825-0608 and we will assist you in providing parts through an authorized dealer or from Jay Parr Supply, our parts department located in Middlebury, Indiana.

Owner's Responsibility

As a new owner of a Jayco recreation vehicle, you are responsible for regular and proper maintenance. This will help you prevent conditions arising from neglect that are not covered by your Jayco Limited Warranty.

Maintenance service should be performed in accordance with this owner's manual and any other applicable manuals.

As the owner, it is your responsibility and obligation to return the RV to an authorized dealer for repairs and service. Reference your Limited Warranty for additional information. Because the authorized dealer where you purchased your RV is responsible for its servicing before delivery and has an interest in your continued satisfaction, we recommend that inspection, warranty and maintenance services be performed by the dealership.

USE OF YOUR TRAVEL TRAILER

In this chapter you will find helpful information to assist you in preparing, traveling and using your travel trailer.

EQUIPMENT

Tow Vehicle

WARNING: BEFORE USING YOUR TRAVEL TRAILER ON THE ROADWAYS. Review the compatibility of your tow vehicle with the trailer you will be towing. You should not exceed the gross vehicle weight rating of the trailer (GVWR). Know your loaded hitch weight and select a hitch that is adequate for that weight. You, as the owner, are responsible for the safety and compatibility of your tow vehicle and trailer selections. Consult your hitch and tow vehicle manufacturers with any questions before you tow your trailer. You are responsible for the maintenance of your tow vehicle and trailer. Do not exceed the tow or cargo capacity of your TOW vehicle, and remember that the gross combined vehicle weight rating (GCVWR) relates to towing capacity and does not necessarily indicate braking capacity. Do not overload your trailer with additions, cargo, or tank fluids to exceed the GVWR of the trailer. Do not load your trailer so that it is unbalanced from front to rear or from side to side. You should clearly understand how your particular tow vehicle capacities are calculated. Make sure your tow vehicle is mechanically sound for your intended usage and pay particular attention to suspension components, tires and tire pressure. We recommend that you use anti-sway devices and weight distributing hitches with all Jayco towable products. Many states have lower speed limit requirements for tow vehicle/trailer combinations. Obey all traffic laws and use your seat belts at all times. We recommend that you do not exceed 55 M.P.H. when towing a trailer. Consult an expert for specific driver education when towing a trailer. There are private RV driving schools and some RV clubs offer driving seminars as part of their club activities. Recreation vehicle publications and the Internet can be a source of information regarding RV driver education as well as many other topics to help you learn to safely use your recreation vehicle.

Consult experts on hitch and tow vehicles before you tow your trailer. Jayco does not recommend or endorse particular tow vehicles or hitch assemblies. Review the compatibility of your tow vehicle with the trailer you will be towing. As a minimum requirement, the gross vehicle weight rating (GVWR) of your trailer must not exceed your tow vehicle's rated towing capacity. Know your loaded hitch weight and select a hitch that is adequate for that weight. You, as the owner, are responsible for the safety and compatibility of your tow vehicle and trailer selections. You are responsible for the maintenance and proper connection of your tow vehicle, hitch assembly, and trailer. Do not exceed the towing or cargo capacity of your tow vehicle and do not exceed the GVWR of the trailer. You should clearly understand how your particular tow vehicle capacities are calculated. Make sure your tow vehicle is mechanically sound for your intended usage and pay particular attention to suspension components, tires, and tire pressure. Anti-sway devices and

weight distributing hitches should be used with all Jayco towable products, with the guidance of a trained hitch installer. Towing a trailer is not the same as driving a passenger car or a single vehicle. Many states have lower speed limit requirements for tow vehicle/trailer combinations. Obey all traffic laws and use your seat belts at all times. Do not exceed 55 M.P.H. when towing a trailer. Consult an expert for specific driver education when towing a trailer. RV driving schools and some RV clubs may offer helpful driving seminars as part of their club activities.

Begin your camping experiences by using a tow vehicle that will adequately transport your travel trailer to and from your destinations. You must use the Gross Vehicle Weight Rating (GVWR) factor as a measuring tool to match the capability of your selected tow vehicle. Ford, Chrysler-Daimler and Chevrolet provide trailer towing guides for their products, as do most auto and truck manufacturers. Ask your local automotive dealer for a copy or contact the factory's customer assistance for information. Most tow vehicles have towing packages available as an option and these should be given serious consideration. The condition of the suspension system in your tow vehicle is also important and will affect your trailer's handling. Become familiar with and understand how to properly distribute loads in your trailer and tow vehicle and never overload either unit. Make sure your tow vehicle is in good mechanical condition and maintenance is up to date. When you tow a RV, you must drive differently than you do when driving a single vehicle. Practice hooking up, driving, backing up and braking in a safe environment (with vehicles fully loaded as if for normal travel if possible) or seek out professional instruction. Obey all posted speed limits.

WARNING: Be prepared to drive slower and if you must pass, do so with the utmost care, particularly in strong winds. When being passed by or when passing semitrailers or large buses, be prepared for displaced air, as it can be severe enough to cause trailer sway. Understand how trailer brakes, tow vehicle brakes, acceleration can affect your control of the trailer when you experience trailer sway as well as proper hitches and sway controls.

There are many excellent publications about traveling with a RV. We strongly recommend you make use of available resources at your local library, the Internet or bookstore.

Hitches

After choosing your tow vehicle, it is very important to install a hitch system with weight distributing bars to accommodate your travel trailer. This selection and installation should be performed by a professional hitch service which may or may not be your selling dealer. Sway control(s) may be needed based on size and weight of travel trailer, as well as your tow vehicle.

A Class IV weight distribution hitch package is suggested. The rating of the hitch package should be equal to or greater than the trailer's GVWR and the hitch weight. The very equipment that sometimes gives autos, trucks and sport utility vehicles a softer ride can accentuate swaying when pulling a travel trailer. Conversely, suspension that is too stiff will increase vibration, bounce and accelerate wear of your tow vehicle and travel trailer. It is important that your travel trailer be level when hitched to your tow vehicle. Educate yourself to protect you, your family and other motorists.

WARNING:We recommend the use of an anti-sway device or sway control for all tow vehicle/trailer combinations.

CAUTIONS:

- Using an oversized or undersized hitch can cause damage to the frame of your travel trailer.
- Jayco, Inc. cannot be responsible for the suspension system of the tow vehicle. The final hitch ball height after the travel trailer is completely hooked up is a factor to be considered. To avoid overloading your RV axles and minimize possible handling difficulties, your RV should tow level when hooked to your tow vehicle.
- Do not overload your tow vehicle.

Hitch Height

Note: To determine the hitch height for your model, make sure that the travel trailer is level. Measure from inside the hitch coupler to the ground. Record this number in the box at the side for future reference. The measurement below is an average measurement obtained by measuring several units with different options. This gives you a target range for what your unit will measure.

This unit hitch height is:

Unit	Ball Height	Ball Size
29 BH, 24 FB, 26 FK	21-1/2”	2-5/16”
31 BHS, 26 FBS	22-1/2”	2-5/16”

Hookup

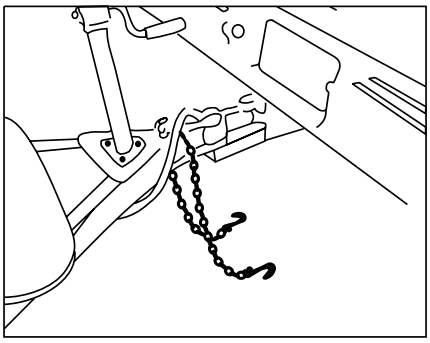
Hooking up a travel trailer is not difficult and will become easier with practice. The following procedure will help you until you become more experienced.

1. Block wheels.
2. Turn crank on jack to raise tongue of trailer above hitch ball on hitch.
3. Open coupler latch.
4. Back tow vehicle into proper position.
5. Turn crank on jack to lower coupler onto ball hitch.
6. Close coupler latch after completely seated.
7. Install weight distributing bars (equalizers) as per recommendations from hitch supplier, when required.
8. Remove dolly wheel and retract tongue jack to its maximum height.
9. Attach cable for break-away to tow vehicle.
10. Attach safety chains as shown in Figure 3-1.
11. Plug in your 12-volt electrical connector from tow-vehicle to trailer.
12. The following items should be inspected prior to your journey:
    - All lights should be in working order.
    - Stabilizer jacks should be in the retracted position.
    - Entrance steps should be in the retracted position.
    - Refrigerator door should be closed and locked.
    - All loose items should be secured.
    - Brakes should be tested for operation prior to entering roadway.
    - Tire pressure should be checked and maintained per the tire pressure stamped on the tire sidewall.

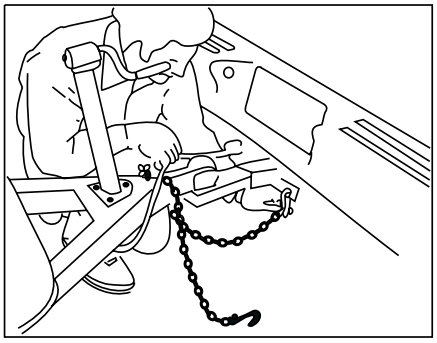
The Safety Chain

There are different safety chain requirements determined by the various state laws. Your vehicle is equipped with chains to meet SAE standard requirements for maximum gross trailer weight. Always have the safety chains attached when towing. Install them as shown below so they do not restrict sharp turns, but tight enough so they do not drag on the ground. (Fig. 3-1)

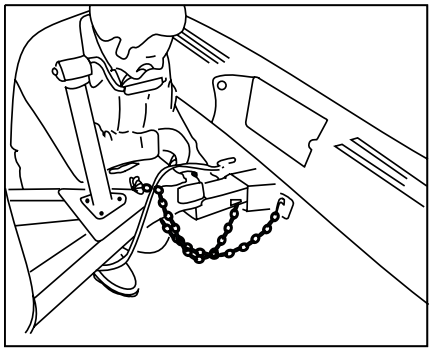
Figure 3-1



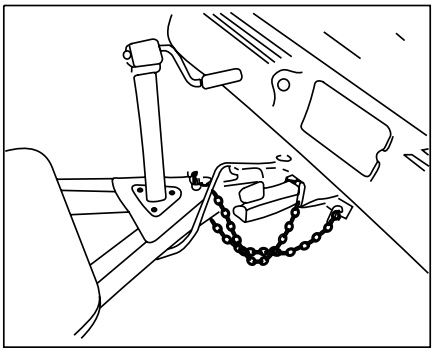
1. Inspect chains to determine if they are properly attached to trailer frame.



2. Criss-cross left chain and attach to right mounting slot in tow vehicle hitch.



3. Repeat step 2 with right chain. Slack for each length should be the same but not more than necessary to permit the vehicle to turn at their minimum radius.



4. Properly mounted safety chains. Note that the jack is fully raised and dolly wheel removed.

Hitches - Fifth-Wheel Travel Trailer

Different types of hitches are available for pickup trucks to tow fifth-wheel travel trailers. The best type of hitch is one that is bolted directly to the floor of the truck box through the frame.

Another type of hitch is the mini-hitch. The mini-hitch has two brackets attached to the truck box, and is placed over the fender. This type of hitch generally does not provide frame support for strength.

Hitch Height - Fifth-Wheel Travel Trailer

There is no recommended hitch height for fifth-wheel travel trailers. The pin box is adjustable at two inch intervals for variance in trucks and their suspension systems. Always travel with the truck and travel trailer as level as possible.

The Hitching Procedure - Fifth-Wheel Travel Trailer

1. Block wheels.
2. Make sure the hitch lever is in its open or "cocked" position unless it has been designed to open automatically.
3. Back the truck so the hitch encircles the fifth-wheel travel trailer pin.
4. A gentle contact of the hitch saddle against the pin will cause the mechanism to close.
5. Secure the hitch lever as specified by manufacturer.
6. Be sure to raise the fifth wheel landing gear all the way up.
7. Attach breakaway switch cable to tow vehicle.
8. Plug the 12-volt DC electrical connector from tow vehicle to fifth-wheel travel trailer.
9. Raise the tailgate of tow vehicle, if applicable.
10. When unhitching, make sure you do not forget to lower the tailgate.

Towing

While towing your Jayco travel trailer you need to be aware of the extra weight behind your vehicle. The following list contains some pointers to remember while traveling.

1. With the travel trailer attached you will have slower acceleration and need more distance to stop.
2. Ensure you have enough area at corners when turning, as wider turns are necessary. Utilize your turn signals for your own safety.
3. When passing or changing lanes, take into consideration the overall length of your travel trailer and allow ample distance and time. DO NOT SPEED AND BE PREPARED FOR DISPLACED AIR WHEN PASSING OR BEING PASSED BY LARGE TRUCKS.
4. Use your rearview mirrors frequently to observe your trailer and traffic conditions.
5. When being passed by a large truck or bus, be prepared for displaced air as it may cause the trailer to sway slightly. Steer straight and use your trailer brakes if necessary to slow slightly or control sway on the trailer.
6. Upon climbing steep, long grades and again descending, use lower gears even before it seems necessary. Use your brakes smoothly and evenly.
7. Decrease your speed for safety! Most states require cars pulling trailers to maintain slower speeds, usually the same as truck traffic. Do not exceed 55 m.p.h.
8. Drive slowly during wet and icy conditions to ensure better control of your vehicle.
9. Check all exterior lights before each trip.
10. Obey traffic laws, allow extra time for stopping and decrease speed when visibility is limited or roads are wet.
11. Have a safe and wonderful trip!

If towing a trailer is new for you, please take time to practice towing, parking and backing skills prior to traveling. Your dealer can answer many of your questions, but nothing replaces practice. We recommend you find a large and quiet parking lot to practice your skills.

TRAVELING

Weights and Cargo Capacity

For safety reasons, it is very important to provide RV owners with the most accurate weight information available. The "Federal Certification" label (Fig. 3-2), located on the roadside front corner of the travel trailer is shown here. Several weight terms an owner needs to understand when operating a towable recreation vehicle are defined on the "Trailer Weight Information" label (Fig. 3-3), which will be found on the back of a cabinet door in the kitchen base cupboard. An important term in addition to the label information is the GAWR (Gross Axle Weight Rating). The GAWR is the maximum weight rating that components of each axle are designed to support (i.e. tires, brakes, springs, axle). Make sure that you review and understand the weight terms and information.

The weight provided in the Jayco literature for your travel trailer is based on standard equipment on that particular model and is "dry" (i.e. no liquids of cargo). Remember that any options or personal cargo added must be subtracted from the available cargo capacity. Never exceed the gross vehicle weight rating of your travel trailer.

WARNING: Do not add accessories or components that are not safe and appropriate for this product. Jayco, Inc. DOES NOT provide warranty coverage for equipment installed by dealer or owner for such modifications or additions. Any such modifications effect weight specifications, and can adversely affect handling and stability of the unit, as well as accelerate wear to other components.

MANUFACTURED BY : JAYCO, INC. DATE : _____
FABRIQUÉ PAR :

GVWR:/PNBV KG.	VIN/NIV		PRESS./ COLD INFL. PRESS. DE GONFL. À FROID	
		SIZE/DIMENSION		
GAWR/PNBE		TIRE/PNEU RIM/JANTE	PSI/LPC	KPA
_____	FRONT / DEVANT	_____ _____	_____	_____
_____	INT/ CENTRAL	_____ _____	_____	_____
_____	REAR/ ARRIÈRE	_____ _____	_____	_____

TYPE OF VEHICLE/TYPE DE VÉHICULE **TRAILER/REMORQUE**

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDEDERAL MOTOR VEHICLE SAFETY STANDARDS AND STANDARDS PRESCRIBED UNNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

CE VÉHICULE EST CONFORME À TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLÈMENT SUR LA SÉCURITÉ DES VÉHICLUES AUTO-MOBLES DU CANADA EN VIGUER À LA DATE DE SA FABRICATION CI-DESSUS.

Fig. 3-2

WARNING: Your recreation vehicle's load capacity is designated by weight, not by volume, so you cannot necessarily use all available space when loading the vehicle. Do not exceed your gross vehicle weight capacity and ensure you are loading the unit as evenly as you can for the best possible handling. Ensure heavy items are secured so they do not shift during travel.

TRAILER WEIGHT INFORMATION

VIN or SERIAL NUMBER _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

MODEL _

GVWR (Gross Vehicle Weight Rating) is the maximum permissible weight of this trailer when separated from the tow vehicle.

UVW (Unloaded Vehicle Weight) is the total weight of this trailer as manufactured at the factory when separated from the tow vehicle. If applicable, it includes full generator fuel, engine oil, and coolants.

CCC (Cargo Carrying Capacity) is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including the water heater), full LP-gas weight.

GCWR (Gross Combination Weight Rating) means the value specified by the trailer manufacturer as the maximum allowable weight of this trailer with its towed trailer or towed vehicle.

**The GCWR of this trailer is:

CARGO CARRYING CAPACITY (CCC) COMPUTATION

Pounds / Kilograms (kg.)

GVWR . . . . . .

Minus UVW . . . . . .

Minus fresh water weight of __gallons @ 8.33 Lbs./gal. . . . . .

Minus LP-gas weight of ____ gallons @ 4.24 Lbs./gal.. . . . . .

CCC for this trailer* . . . . . .

*Dealer installed equipment will reduce the CCC.

**This trailer is not recommended or intended to be used to tow any other vehicle or trailer.

CONSULT OWNER MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.

Fig. 3-3

Loading Cargo

Packing camping gear in your travel trailer requires serious consideration. All cargo should be distributed evenly with the heaviest items stored in the lower cabinets. Heavy items must be secured to prevent weight shifts while traveling. Additional weight should be added to either side of the trailer, or behind or in front of the axle in an even manner so the balance and hitch weight of the trailer are maintained. Heavier items should always be packed over or in front of the axles.

C CAUTION: DO NOT overload your travel trailer. Do not exceed the GVWR of your Jayco travel trailer.

When loading is completed, it is strongly suggested that you drive to a large scale and have your travel trailer weighed. If you are over loaded, it is advisable that you remove some of your cargo or liquids.

W **WARNING: The rear bumper on the frame of conventional travel trailers and fifth-wheel travel trailers is not designed to carry over 100 pounds (45 kilograms). Never add items such as generators, motorcycle racks, heavy tool boxes, etc. to the back of your travel trailer. Installation of items exceeding 100 pounds (45 kilograms) could cause metal fatigue and weld stress. DO NOT tow a trailer behind your travel trailer. Your trailer frame and bumper are NOT designed to tow another trailer. Towing a trailer behind your Jayco trailer or overloading the rear may result in damage to your trailer or to the added items, or cause towing difficulties, resulting in property damage or personal injury.**

C CAUTION: Damage from add-on equipment or improper loading is not covered by your Jayco Limited Warranty.

W **WARNING: We recommend that you DO NOT travel with waste in your holding tanks. The weight of holding tank contents is not calculated into the cargo carrying capacity of the unit and the extra weight will greatly diminish the cargo weight available to you, possibly causing you to exceed the gross vehicle weight rating of the unit. This can damage suspension components, such as springs, tires and axles. If your model has the holding tanks located behind the axles, the weight of a full tank will reduce the hitch weight. Sway and other handling difficulties can be the result of the hitch weight being too light. If you are dry camping and cannot immediately empty the tanks, use caution when towing and maintain lower speeds for better control of the trailer until you reach a dumping station. Towing your trailer with one or more tanks with full or nearly full tanks, together with cargo you have added, may exceed the GVWR of your trailer, causing towing difficulties and resulting in property damage or personal injury.**

WEIGHING INSTRUCTIONS

To properly weigh your recreation vehicle, it should first be weighted, including the tongue weight, while detached from the tow vehicle. This actual overall weight must be less than or equal to the GVWR for safe operation. If the overall weight is greater than the GVWR, some contents must be removed until maximum GVWR limitations are achieved. Once the actual overall weight is determined and the recreation vehicle is within GVWR limits, the following weights should be determined:

1. The weight of complete recreation vehicle, while attached, but excluding the tow vehicle. This will result in the actual weight which is exerted on all of the recreation vehicle tires. This weight may be subtracted from the overall recreation vehicle weight (above) to determine actual "tongue" weight.
2. With the recreation vehicle still attached to the tow vehicle, each wheel position should then be weighed separately to be sure each tire is not overloaded.

   TO DETERMINE THE WHEEL POSITION WEIGHT:
   - Pull the recreation vehicle onto the scale so that only one tire is on the scale. Record the weight. Your trailer must remain as level as possible on the scale (even though an axle or side is not physically on the scale). Obviously, to obtain the side-to-side weights, there must be enough space on either side of the scale to accommodate the recreation vehicle being partially off the scale.
   - To calculate the opposite side of the vehicle wheel position weight, subtract the first side's weight from the weight determined in step #1.

If there is a difference in the weights on one side of the vehicle as compared to weights on the other side, components (tires, wheels, brakes, springs, etc.) on the heavier side could be overloaded, even though the total axle load is within the GVWR. It is important to redistribute the load to avoid component failure, as well as to improve the handling characteristics of the vehicle.

TIRES

All Jayco towable travel trailers are equipped with name brand tires, designed and built for recreation vehicles. Tires are radial in design, having two steel cords and two polyester cords, offering excellent strength and mileage in various types of weather.

The air pressure should be maintained at its recommended pressure. Always check the tires when they are cold, such as before traveling at the beginning of the day. It is normal for air pressure to increase when traveling as tires will heat up. Do not release air pressure as tires become hot. If you do, the tires will then be under-inflated when they cool down.

WARNING: It is recommended that the tire pressure be checked at the beginning of each journey to obtain the maximum life of the tires. Underinflated tires may overheat and fail or detach from the rims.

Inflation

Always follow inflation guidelines printed on sidewall of tire.

NOTE: Tires are warranted by the manufacturer of their respective brand, and are to be serviced and warranted by a service center. They are not to be returned to the dealer or manufacturer of your RV trailer.

For tire removal and raising travel trailer, see Chapter 7, Maintenance.

UNIT	TIRE SIZE	LOAD RANGE	MAX. LOAD PER TIRE
29 BH, 24 FB, 26 FK	ST205/75R15	C	1820
31 BHS, 26 FBS	ST205/75R15	C	2150
26.5 RKS	ST225/75R15	D	2540

Wheel Lugs

When the wheels are installed on your Jayco travel trailer, the lug nuts must be tightened at 90-120 foot pounds of torque. Size of bolts or nuts is 13/16".

WARNING: Wheel lugs should be checked at 25 miles when new, then every 3,000 miles. The wheel lugs should then be checked after winter storage, before starting a trip, or following extensive braking. Over-torquing wheels is as dangerous as under-torquing. Read and understand all information supplied by the manufacturer.

Brakes

A controller should be installed below the dashboard of your tow vehicle to work in conjunction with the travel trailer brakes. Two types of controllers are available. The "hydraulic" controller operates through a steel line attached to the master cylinder of the tow vehicle's brake system. The "electronic" controller, operates using electrical current. Reference the operating instructions provided with the controller for adjustment and operation procedures. Practice coordinating the trailer brakes with the tow vehicle brakes before towing your vehicle at higher speeds or significant distances. Employing the trailer brakes before the tow vehicle brakes will reduce swaying.

Electric

Electric brakes on your recreation vehicle are designed to work in conjunction with the hydraulic brakes on your tow vehicle. This means that in order to have the best brake performance on both systems, the trailer and tow vehicle must perform and operate together. Any attempt to use either brake system alone will cause accelerated wear and damage.

The battery in the tow vehicle is the primary power source that operates the brakes in your travel trailer. Keep your battery and charging system in working operation to ensure available energy when required.

From the battery, power is sent to the controller to provide the correct amount of current to brake the travel trailer. Use the tow vehicle's brake pedal control for general operation on combined use

of both brake systems. The controller's manual control is to be used only in special situations such as indicated in the instructions supplied with control. In the open position, the manual control breaks the electrical current preventing brake engagement. When in the closed position, electrical current will flow to brake assemblies.

Wiring to operate your brakes must be sized in both vehicles, suggesting a minimum of 14 gauge. Your camper has 14 gauge wire from front end to brakes.

Brake assemblies are wired in parallel, never in a series. Being parallel, there will be equal voltage and amperage at each brake assembly for equal braking capability and/or performance.

When your travel trailer is new it is impossible to adjust your brake shoe precisely. It takes approximately 1,000 miles and/or 50 medium to heavy stops to "burnish" fit or seat the shoes to drum. After this initial break-in, you can now adjust your shoes accurately for best performance and increased durability.

Breakaway Switch

The breakaway switch (Fig. 3-4) is one of the most important parts of your trailer electric brake system. The very instant a breakaway occurs, the pull pin which is linked to the tow car, is pulled from the switch. The two contacts automatically close to complete the electrical circuit and apply the trailer brakes. This system will apply the brakes of the trailer should it break away from the tow vehicle. A 12-volt battery is required to power the breakaway switch.

WARNING: NEVER use the breakaway switch and trailer brake system as a parking brake. Usage in this way would place undo strain on the battery and converter, potentially causing damage to the wiring, connectors,brakes and breakaway switch.

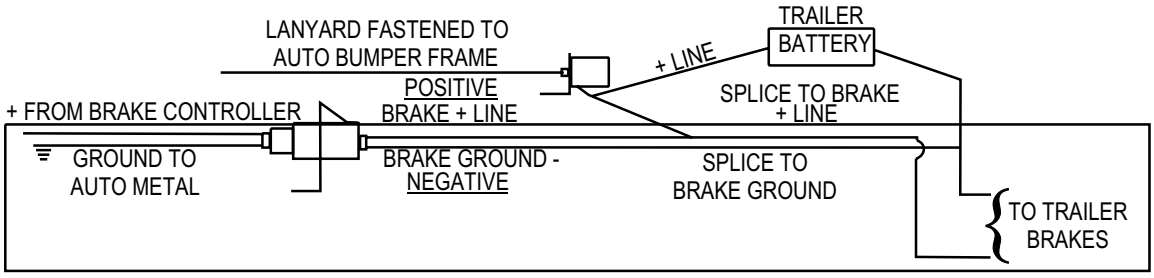


Fig. 3-4

Breakaway Switch Schematics

Setting Up Your Travel Trailer

We recommend that you select a level or nearly level place for camping. There are two reasons to be level. First, your travel trailer is designed to operate in a level position for both water drainage system and especially your refrigerator. Second, it is more comfortable to live on the level. Should a level site not be available, use short 2" x 6" blocks of wood to raise the low side wheels.

Before unhooking the travel trailer from tow vehicle, always mount dolly wheel to tongue jack and block trailer wheels to keep trailer from moving.

1. Release weight distributing bars (if used).
2. Release safety latch on coupler.
3. Raise coupler on A-frame by turning tongue jack until ball is free.
4. Disconnect 7-way wire connector, safety chains, and breakaway cable.
5. Move tow vehicle away as desired.
6. Lower tongue jack until travel trailer is level.
7. Lower the stabilizer jacks (Fig. 3-5) by placing the crank onto the jack shaft and turning clockwise to lower it until the frame of the travel trailer begins to rise slightly. Equalize all four jacks for best support. You may need to adjust each jack two or three times. For convenience when you are not parked on cement, you may wish to place a wood or hard plastic block under the jack.

Fig. 3-5

C CAUTION: Do not use the stabilizer jacks to level the unit. It is important to remember that stabilizer jacks are to be used only for support while occupying and moving around in your travel trailer. They are not designed to bear the weight of the travel trailer.

SLIDEOUT OPERATION

W **WARNING:**

- **Ensure that the travel trailer is level before operating the slideout room (if equipped).**
- **Ensure there are no people or obstructions blocking the path of the room when it is moving.**
- **Keep away from the slide rails when the room is in motion.**
- **The gear assembly may pinch or catch on loose clothing causing personal injury.**
- **Always install travel bars for storage and transportation.**
- **Ensure the slideout is in the closed position prior to hooking the unit to the tow vehicle.**

Failure to follow these instructions could result in serious injury or death.

C CAUTION: Do not place excessive weight in the slideout room.

Electric (Option)

EXTENDING ROOM

1. Release the travel lock bars at the top of the slideout.
2. Ensure that there are no obstructions in the way of the slideout room.
3. Using the slideout switch (Fig. 3-6), press the out portion of the button and hold it until the room is extended. The travel time for this operation is approximately 25 seconds. Release the button.

Fig. 3-6

RETRACTING ROOM

1. Ensure that there are no obstructions in the way of the slideout room.

> **C** CAUTION: For model 26 FBS, make sure that the bathroom door is latched before retracting the slideout for storage. Failure to do this could result in damage to the bathroom door and unit wall.

2. Using the slideout switch (Fig. 3-6), press the in portion of the button and hold it until the room is retracted. The travel time for this operation is approximately 25 seconds. Release the button.
3. Install the travel lock bars at the top of the slideout.

ELECTRIC OVERRIDE

1. Locate the slideout electric motor under the unit.
2. Make sure the brake on the electric motor is disengaged by moving the metal lever to the disengage position. (Fig. 3-7)
3. Proceed with the instructions below for manual operation.

Fig. 3-7

Manual

EXTENDING ROOM

1. Located behind the fender skirt or radius skirt is the slideout lock.
2. To disengage the lock, turn it counter clockwise to the unlock position. (Fig. 3-9)
3. Insert the crank handle. (Fig. 3-8) Turn the handle counter-clockwise until slight tension is felt on the handle.
4. Engage the lock by turning the handle clockwise to the lock position. (Fig. 3-10)

Fig. 3-8

Fig. 3-9

Fig. 3-10

RETRACTING ROOM

1. Disengage the lock by turning it counter-clockwise to the unlock position. (Fig. 3-9)
2. Insert the crank handle. (Fig. 3-8) Turn the handle clockwise until the room is retracted.
3. Engage the lock by turning it clockwise to the lock position. (Fig. 3-10)

Getting Connected

Upon completing the setup of your travel trailer, you are now ready to make attachments to various facilities as listed but not limited to:

1. Fresh water hose supply.
2. Waste water hose connection(s).
3. 120-volt power cord electrical hookup.
4. Turn on LP propane tanks and light pilot lights for any appliances. Remember there may be air in your LP propane lines. Be sure to bleed them before planned usage.
5. Open any windows and roof vents as desired for ventilation.

You may have additional accessories and options, such as an awning on door side, which need to be opened. Separate instructions are provided by the manufacturer of the component.

C CAUTION: When preparing to depart or move, reverse the procedure above. Remember, open roof vents, windows, TV antennas left in up position are subject to wind damage in transit.

See the process to follow before departing from your campsite under the hitching procedures listed earlier in this chapter.

TV ANTENNA

Raising Antenna to Operating Position

Turn the elevating crank clockwise in the UP direction about thirteen turns or until some resistance to turning is noted. (Fig. 3-11)

On Amplified models, 12-Volt DC power is required. Turn the power supply ON to use either the front or rear TV outlet. (Fig. 3-12) Neither outlet will work unless the power supply switch is on. Turning the power supply on sends 12-volt DC through the cable to the antenna. The voltage energizes the transistors on the amplifier in the antenna head. The TV signal comes back down the cable to the outlets.

After the antenna is in the full UP position, pull down on the round knob with both hands until it disengages from the ceiling plate. Rotate the knob for best picture. (Fig. 3-13)

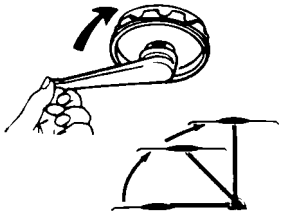


Fig. 3-11

W **WARNING: DO NOT connect high current devices such as hair dryers to this receptacle. Maximum current rating of this receptacle is 8 amps at +12-volt DC.**

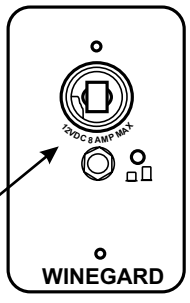


Fig. 3-12

Fig. 3-13

To Test System

1. Make sure the TV set is working properly.
2. Switch the power supply ON and OFF to see if there is a difference in the picture quality while watching TV. If there is NO difference, refer to manufacturer's manual for further testing procedures.

> **C** CAUTION: The power supply should be turned OFF when connecting/disconnecting the cables to the power supply and antenna, but should be turned ON when testing for voltage.

Lowering Antenna to Travel Position

Rotate the antenna until the pointer on the directional handle aligns with the pointer on the ceiling plate. (Fig. 3-13) Turn the elevating crank counterclockwise in the DOWN direction about thirteen turns or until resistance is noted. (Fig. 3-11) The antenna is now locked in the travel position.

> **C** CAUTION: When lowering the antenna, never lower it into any position except the travel position. Failure to lower antenna into the travel position before traveling may damage the antenna and is not covered by warranty.

Maintenance

See "TV Antenna Maintenance" in Chapter 7.

FIRE EXTINGUISHER

A fire extinguisher (Fig. 3-14) is installed in each vehicle and is located near the entrance door in the travel trailer. Be familiar with its location and operating instructions as printed on the extinguisher. It's too late to become familiar with an extinguisher when an emergency is at hand.

The fire extinguisher is a dry chemical, non-refillable extinguisher. Do not test this extinguisher by partially discharging. Doing so will cause loss of pressure making the extinguisher unusable. The extinguisher must be discarded and replaced by a new one if any use has occurred.

Fig. 3-14

Inspection and Maintenance

To insure that your fire extinguisher will be ready when needed:

- Read and follow all instructions on label and in owner's manual.
- Inspect the extinguisher AT LEAST once a month - more frequently if exposed to weather or possible tampering.
- Check pressure by pressing in white indicator button. If button does not spring back, extinguisher will not work properly and must be discarded.
- Be sure the yellow lock pin is firmly in place.
- Keep the extinguisher clean. Check for dents, scratches, corrosion or any other damage.
- Check the discharge nozzle. Make sure it is clean and free of obstructions.

CAUTION: Under certain fire and heat conditions, the dry chemical powder in this extinguisher (and similar units) will cause damage or prove extremely difficult to remove from oven surfaces, including self-cleaning models. Do not use self-cleaning feature to remove ABC Powder.

CAUTION: Avoid inhaling the dry chemical agent. The agent contained in this extinguisher is not toxic, but may cause skin irritation. In case of contact, flush affected area with clean, cool water. If irritation persists, contact a physician immediately. Chemical name of agent is printed on extinguisher label.

THE SYSTEMS

PLUMBING SYSTEM

Included in your Jayco recreation vehicle is a complete fresh water system. Fresh water may be obtained through two sources: city water connection or gravity fill tank. Each component is explained along with its operation.

Fig. 4-1

City Water Connection

Water may be received into the system through a direct hookup referred to as the city water connection. (Fig. 4-1B) After hooking up water hose to travel trailer, open valve on supply line. Enter coach and open faucets to bleed air from lines. Water will fill water heater first before supplying lines and faucets. When lines are almost full, you may experience some air pockets. Allow them to escape before closing faucets.

C CAUTION: Excessive pressure from water supply systems may be encountered in some parks, especially in mountain regions. Water pressure regulators are available to protect your system against such high pressure. A regulator of this type is recommended to prevent damage to plumbing systems or components. Not using a water pressure regulator when using city water may cause the o-rings to blow. It is advisable to always use a water pressure regulator when using the city water connection.

Water Tank - Gravity Fill

A water container is permanently installed in your recreation vehicle. On some models it is located inside the travel trailer under a bed, dinette, or sofa. Other models may have an external tank under the floor between frame members. To fill the tank, there are two types of gravity fill connections to the fresh water tank. Fig. 4-1A is the type found on most models.

The fresh water tank can be filled by removing the gravity fill cap and inserting a garden hose. Open faucet from water supply and fill tank. .

C CAUTION: DO NOT leave tank unattended while filling. You must be careful not to over fill tank. This can pressurize the tank, causing leakage and water damage.

12 Volt DC Demand Pump

Fig. 4-2

When water is desired and you are not hooked up to city water, you need to turn on 12 volt DC power to start the demand pump. Fig. 4-2 shows a typical demand pump set up. Depending on your travel trailer model, the demand pump will be located under the bed, in a cupboard, or under the sink. The switch to operate the pump is located on the monitor panel. Energy for the pump is supplied by the auxiliary battery or converter. The pump will self prime when started and provide water for your travel trailer. The pump continues to run until approximately forty pounds of pressure is achieved and automatically starts again when pressure drops to twenty pounds. Some cycling in the pump may occur, depending on the volume of water being released. A check valve is built inside of the pump to prevent water from flowing into supply tank.

NOTE: The water pump switch should be in the off position when the camper is left unattended for any amount of time. If something would happen to the water system, this will ensure that water damage will be restricted to a small area.

Sanitizing and Filling the Potable Water System

Potable water systems require periodic maintenance to deliver a consistent flow of fresh water. Depending on use and the environment the system is subject to, sanitizing is recommended prior to storing and before using the water system after a period of storage. Systems with new components, or ones that have been subjected to contamination, should also be disinfected as follows:

1. Use one of the following methods to determine the amount of common household bleach needed to sanitize the tank.
   - Multiply "gallons of tank capacity" by 0.13; the result is the ounces of bleach needed to sanitize the tank.
   - Multiply "liters of tank capacity" by 1.0; the result is the milliliters of bleach needed to sanitize the tank.
2. Mix the proper amount of bleach into a container of water.
3. Pour the solution (water/bleach) into the tank and fill the tank with potable water.
4. Open all faucets (Hot and Cold) allowing the water to run until the distinct odor of chlorine is detected.
5. The standard solution must have four (4) hours of contact time to disinfect completely. Doubling the solution concentration allows for contact time of one (1) hour.
6. When the contact time is completed, drain the tank. Refill with potable water and purge the plumbing of all sanitizing solution.

NOTE: The sanitizing procedure outlined above is in conformance with the approved procedures of RVIA ANSI A119.2 and the U.S. Public Health Service.

If there is a problem of excessive chlorine odor and taste after the sanitizing process, follow the above procedures using a solution of baking soda (1/2 cup added to one gallon (4 liters) of water per 15 gallons (60 liters) of tank capacity) or vinegar (one quart added to five gallons (20 liters) of water per 15 gallons (60 liters) of tank capacity.)

Your demand water system is now ready for use.

Faucets

Bathroom (Fig. 4-4) or kitchen (Fig. 4-3) faucets operate the same as in your home. Open by turning knobs. There may be air in lines which needs to be bled out. Close faucets when sufficient water is released.

Fig. 4-3

Fig. 4-4

Bath and Shower

Your bathroom facilities function similar to those in your home. Prepare bath or shower curtains to prevent water from spilling onto floor. Ensure water heater is in operation before bathing. Adjust the faucets for desired temperature before entering tub or shower.

Used water will drain through plumbing pipes into gray water holding tank. Remember there are limited capacities in the water heater and gray water holding tank. Long showers in a recreation vehicle are NOT suggested due to the amount of water that is available.

Any tub or shower faucet requires a vacuum breaker when a shower hose and head is used. There are two purposes for this breaker; first to prevent siphoning water through the hose from another fixture, and secondly to prevent water from being contained in the hose. The shower head also DOES NOT have a complete shut-off valve. Any drainage from either part is normal function and NOT a leak. The complete shut-off is at the faucet.

Outside Shower (Option)

A convenient faucet (Fig. 4-5) assembly with hot and cold water is available for exterior use washing and rinsing on the outside of the camper.

OPERATION

1. Activate pump.
2. Open door with key and allow to hinge down.
3. Remove shower head and open valve.
4. Open faucet valves and adjust to temperature as desired.
5. To cease operation, close valve(s) on faucet and allow water to drain from shower head.
6. Close valve on shower head.

Any water remaining in the hose will drip or run out of vacuum breaker. This is NOT a leak, but performs as intended. Water in A.B.S. plastic box will drain out along outer edge. The shower head can be removed to drain the hose faster. Reassemble and place onto bracket. Keep the door closed when not in use for sanitary reasons.

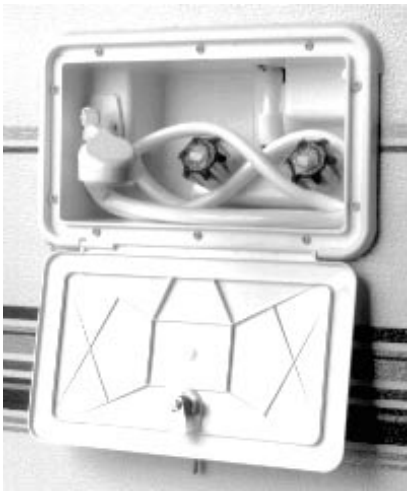


Fig. 4-5

Drainage

All permanent fresh water tanks can be drained by one of two types of drain valve:

1. A white plastic drain is attached to outer wall. Open valve and allow to drain. (Fig. 4-6)
2. A valve is located inside of coach adjacent to the water tank. The knob turns 45° to open and close.

Fig. 4-6

To drain the water supply lines, locate the "low-point" drains as shown in Fig. 4-7. These valves are placed near the floor and may be located under cabinets, dinettes, sofas, beds, or in storage areas. As their name indicates, they will be at the lowest point of water lines. A label is placed on the outside of the travel trailer to indicate where the drains are located. The drains will typically need to be opened from inside the trailer. Once the label is found on the outside of the trailer, go inside to find the corresponding location of the drains.

TO DRAIN SYSTEM:

1. Open all faucets including optional exterior shower.
2. Open fresh water tank drain.
3. Open water heater drain. (Consult water heater owner's manual for details.)
4. Open all (2 to 4 depending on the model of your unit) low-point drains.
5. Open toilet valve, hold or block if need be.
6. To empty pump, start and allow to run 15-20 seconds.

Fig. 4-7

SANITATION SYSTEM

Toilets

The Aqua Magic® 4 (Fig. 4-8) model of toilet is used in your Jay Flight travel trailer. This model features two levers on the back side to flush the toilet.

Operating Instructions - Aqua Magic® 4

The Aqua Magic® 4 is equipped with two operating levers (Fig. 4-9) located on the right side of the toilet when facing the unit. To flush, pull the black lever (Fig. 4-11) forward (clockwise) until rinse clears bowl and release lever slowly. Movement of the flush lever opens the waste valve and allows waste to pass into the holding tank. Water fill is activated simultaneously with the black flush lever. The lever should be held open for several seconds to allow adequate flush water coverage of bowl to develop. The white water fill lever (Fig. 4-10) can be operated independently of the black flush lever if more than the normal two inch (50 mm) automatic bowl refill water is desired. You must use an adequate amount of water when flushing to prevent solid waste build up and promote proper drainage. See Holding Tanks.

Fig. 4-8

Fig. 4-9

Fig. 4-10

Fig. 4-11

Maintenance

See "Toilets" section under maintenance in Chapter 7.

Using Toilet and Tank System

NOTE: For added convenience and better sanitation system performance, it is advisable to always have four to six inches (10-15 cm) of water in the toilet.

Prior to using the sanitation system, it is strongly recommended to flush the toilet several times and release sufficient water into the tank. If there is not a sufficient amount of water used during flushing, waste materials may not evacuate properly from the drain line to the tank. Clogged tanks and pipes could eventually occur. When camping you should always have four to six inches (10-15 cm) of water in the toilet bowl. The toilet system will perform better when water is run for ten to fifteen seconds after flushing to ensure waste will proceed to the bottom of the tank. Unlike your toilet at home which uses four to seven gallons (18-32 liters) of water per flush, the average recreation vehicle system uses one to three quarts (1-3 liters).

When hooking up to the sewer drain line at a campground, keep the termination valve on the waste tank CLOSED until the tank is at least 3/4 full. This will provide sufficient water to assist in complete draining of the tank. At this time, open the termination valve to empty the tank and close the valve when the tank is empty. Repeat this process as needed, but NEVER leave the termination valve open when hooked up to the park's sewer system.

Vents

Another important part of the sanitation system are the vents which release air from tanks. Each tank has a vent pipe built into the travel trailer through the cabinet, wall and roof. A vent cap is attached to the roof and must be clear of obstructions to perform as intended. On some models the vent pipe may be part of the drainage system referred to as a "wet vent." This means water flows downward as air flows upward in the same pipe.

Holding Tanks

The final part of your system are the holding tanks. They hold waste and are located below the floor of your coach. Bath tub and sinks drain into the waste water tank, also referred to as the "gray" water holding tank. The toilet drains into the sewage holding tank, also referred to as the waste holding tank. Certain floor plans may also have the lavatory draining into the waste (sewage) tank.

Sewage Tank Preparation

1. Release one to two quarts (1 or 2 liters) of water into the toilet bowl.
2. Following the directions on your toilet chemical bottle by placing the recommended quantity of holding tank chemical into the bowl.
3. Flush the toilet and allow at least two gallons (8 liters) of water to flow into the tank.

C CAUTION: It is important to add enough water to prevent solid waste build up. Follow these directions each time after emptying your holding tank, except when winterizing.

GRAY WATER HOLDING TANK

No special preparation is required. However, placing a small quantity of chemicals into this tank, such as baking soda or a Thetford chemical, will reduce odors from food particles in the system.

W **WARNING: We recommend that you DO NOT travel with waste in your holding tanks. The weight of holding tank contents are not calculated into the cargo carrying capacity of the unit and the extra weight will greatly diminish the cargo weight available to you, possibly causing you to exceed the gross vehicle weight rating of the unit. This can damage suspension components, such as springs, tires and axles. If your model has the holding tanks located behind the axles, the weight of a full tank will reduce the hitch weight. Sway and other handling difficulties can be the result of the hitch weight being too light. If you are dry camping and cannot immediately empty the tanks, use caution when towing and maintain lower speeds for better control of the trailer until you reach a dumping station. Towing your trailer with one or more full or nearly full holding tank(s), together with cargo you have added, may exceed the GVWR of your trailer, causing towing difficulties and resulting in property damage or personal injury.**

DRAINING THE TANKS

On the outside of the trailer are labels (Fig. 4-12 & 4-13) that indicate the location of the gray and black holding tank drain. A typical set up of the tank drain and termination valves is indicated in

Fig. 4-14. Look for the labels to locate the drain and follow the instructions below to empty the tanks.

Fig. 4-12

Fig. 4-13

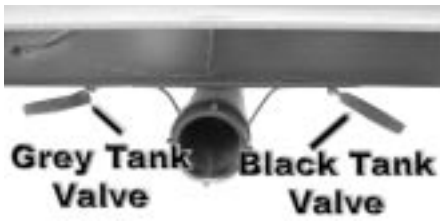


Fig. 4-14

When hooking up to the sewer drain line in a campground, keep the termination valve on the waste tank CLOSED until tank is at least 3/4 full. This will provide sufficient water to assist in complete draining of tank. At this time, open the termination valve to empty the tank (see directions for draining below) and close the valve when the tank is empty. Repeat this process as needed, but NEVER leave the termination valve open when hooked up to the park's sewer system.

To empty tank:

1. Place travel trailer as level as possible to make drainage easier.
2. Attach a flexible sewer hose to adapter and secure with a clamp.
3. Remove cap and attach adapter onto valve housing.
4. Turn adapter 10ø to lock onto pegs.
5. Place other end into approved sewer system.
6. Open the 3" drain valve to drain the sewage tank.
7. Open the valve on the gray water tank to utilize the water to wash and rinse the hose.

All drain pipes have a "P-trap" installed into each line. Water in these traps prevent odors from escaping into the travel trailer. During travel, water from the P-traps may spill and permit odors into travel trailer. These odors come from food particles decomposing in the tank. By adding water and using a RV approved deodorizing agent the contents will dissolve faster and will keep the drain lines and tanks clean and free flowing. Chemicals are available at an RV supply store.

Most states and parks have strict laws and regulations to prohibit dumping of wastes of any kind into anything other than proper disposal facilities or sewer systems. Almost all privately owned parks have either a central pump facility or offer a campsite hookup of sewage. You can find lists of many dump facilities throughout the United States in Woodall's, Rand McNally Camp Guide, Good Sam Camp Guide, KOA Kampgrounds Camp Guide, and various other publications. Some fuel stations also have dump stations.

WINTERIZING TRAVEL TRAILER

Preparing your recreation vehicle for winter is very important for most states and Canada. Failure to prepare the coach will cause supply lines and water heater to freeze causing breakage. Repairs due to freezing are not to be covered under the terms of your Jayco Limited Warranty.

Please keep in mind that your towable RV was not designed for use during sub-freezing weather.

There is no commodity or product that can be added to the fresh water systems to ensure freeze protection while the system is in use, other than RV antifreeze. Do not drink water that contains antifreeze. This includes non-toxic RV antifreeze.

WARNING: Do not use Ethylene Glycol (automotive antifreeze) or Methanol (windshield washer antifreeze) in your fresh water system. They are harmful and may be fatal if swallowed.

The method for winterizing your travel trailer after draining and flushing your drainage system is listed below.

To Wintertize

1. Make sure all holding tanks are empty.
2. Run the pump until dry, about 15-20 seconds.
3. Using an air hose and adapter, blow air through the city water connection.
4. Leave the faucets, drains and toilets open. Any remaining water will blow out in five to ten minutes.
5. Pour one cup of non-toxic RV antifreeze into all drain P-traps.

LP FUEL SYSTEM

It is because of the LP gas system that your RV has the convenience of a refrigerator, stove, water-heater, and furnace. This system has containers that contain the fuel and also regulators to control the pressure of the fuel and supplies the gas vapor to the various appliances. When correctly used, the LP system is very effective and will ensure the comfort and added convenience for your vehicle. This system is also potentially very dangerous and should be used with care.

Liquefied petroleum (LP) is a product that is refined from crude oil through natural gases. Propane is a colorless and odorless gas that in the liquefied state resembles water. An odorant is added as a warning agent. This is usually a sulfur compound which gives the gas the rotten egg, stinky, skunk oil odor. It is extremely important to become familiar with the odor associated with LP gas.

LP fuel is stored in a pressurized canister in a liquid state. As the fuel is released from the canister, it becomes vapor that is needed for the operation of the appliances. In the liquid state, propane should not run through the appliances. A liquid fuel will damage the o-rings in the valves and also leave a sticky, oily residue causing poor or no operation in the regulator.

LP CONTAINER

The tank or bottle is a D.O.T. approved container to hold fuel in liquid form, and is normally a 20# or 30# (44 or 66 kilogams) capacity. The open/close valve is to be closed at all times unless hooked up to LP gas system or filling container. When the container is disconnected from the hose and P.O.L. connection, install P.O.L. plastic plug that is attached to container. This is required by RV industry, Gas Association, and for your own safety. Do not allow the container (filled or empty) to move or roll around while transporting to and from filling location.

WARNING: Because your vehicle has exterior combustion air inlets, all appliance pilot lights should be turned off during gasoline or propane refueling. Laws in some states require this.

Servicing and Filling LP Containers

Filling an LP container correctly is very important and should be performed by a qualified person who knows the proper inspection and safety procedures. Any new container must be carefully purged for best performance and must NEVER BE OVERFILLED.

CAUTION: DO NOT use tools to open or close tank valve. Hand Tighten Only.

CAUTION: Never smoke during the filling of LP tanks. Keep the RV away from immediate filling area when possible or extinguish all gas pilot lights.

LP gas expands 1-1/2% for each 10° increase in temperature. It is imperative to leave sufficient space inside the container to allow for the natural expansion of gas during warmer weather. Each propane container is equipped with an overfill device built into the main valve. This device must remain open during the filling. When the container is filled to 80%, the maximum level for safety, a liquid will appear replacing the vapor. Stop filling immediately and close both valves; hand tighten only.

WARNING: A propane container should never be filled beyond 80% of its capacity.

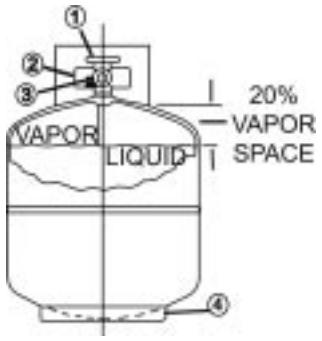
If your tank becomes overfilled and is not allowed to "bleed off" before installation to the RV system, it may gain pressure from exposure to direct sunlight and will begin "blowing off" pressure from the overflow valve. This will be detected by the strong odor around the tanks. Keep open flames away from this area. It is best to find a technician qualified in releasing an overfill from the container. If that is not possible, remove the bottle, take it to a safe area at least twenty-five feet (10 meters) from any source of combustion, and "bleed off" the excess pressure by opening the valve slightly and closing it when discharge has been sufficient, one to two minutes.

WARNING: LP gas containers are equipped with safety devices which relieve excess pressure by discharging gas into the atmosphere. Do not bring or store LP gas containers, gasoline or other flammable liquids inside the recreation vehicle. Disregarding this warning may result in fires or explosions.

When an LP tank gets low, sometimes there is a concentration of garlic-like odor which may be mistaken for a gas leak. After a change over to a full tank, the odor usually will disappear. If not, turn off the LP containers and have the system checked by a qualified technician.

Fig. 4-16

1. Knob to open valve to fill or to use camper.
2. Complete valve assembly.
3. "10%" valve, small brass knob or slot screw.
4. Container mounting stand.



A warning label has been located near the LP gas container. This label reads:

> This gas piping system is designed for use of liquefied petroleum gas only. Do not connect natural gas to this system. Do not fill container(s) to more than 80 percent of capacity. Securely cap inlet(s) when not connected for use. After turning on gas, except after normal container replacement, test gas piping and connections to appliances for leakage with soapy water or bubble solution. Do not use products that contain ammonia or chlorine. AD-34

OPD Overfill Protection

Supplied with your travel trailer is information that applies to the Type 1 ACME LP Gas Connection on your LP gas tank(s). Please read all information contained in the supplied literature.

The following instructions will supply information for correct cylinder/valve orientation, regulator placement, hose length, hose routing and cylinder cover placement. Make sure these steps are followed for proper LP connections.

DUAL CYLINDER ASSEMBLY WITH BOTTLE RACK ON A-FRAME OR FRONT TRUNK

1. Connect the 3/8" low-pressure hose to the outlet of the two-stage regulator.
2. Place the cylinders on the bracket provided on the A-frame and secure them so the outlet of the cylinder valves point outward from the front of the travel trailer.
3. Using the threaded center rod, position the regulator bracket. This centers the regulator between the two cylinders as they are secured to the base tray.
4. Attach the inverted flare x 11" Type-1 pigtail hose to the regulator inlet and the right hand swivel nut to the cylinder valve.

Fig. 4-17

WARNING: The pigtail hose must be installed to avoid tension or pulling stress at either end of the hose.

WARNING: Keep the pigtail hose away from sharp edges of the cylinder collar, rigid corners, walls, doors or other compartment structures including the cover.

Note: The regulator is typically installed with the inlet fittings at the same level as the cylinder outlet valves. Due to bracket design, wing nut clearance or cover restrictions, the regulator fittings may not be in perfect alignment with the cylinder valves. A variance of two (2) inches (5 cm) above or below the line will permit the hoses to be properly installed.

TWO CYLINDERS (20# OR 30#) (44 OR 66 KILOGRAMS) IN A RECESSED COMPARTMENT OR HOUSING

1. Connect the 3/8" low-pressure hose to the outlet of the two-stage regulator.
2. Place the cylinder on the bracket in the recess compartment or housing and secure them so the outlet of the cylinder valves are facing the "sidewalls" of the compartment or housing.
3. Mount the regulator on the center back wall of the compartment or housing so the vent is pointed downward.
4. Attach the 1/4" inverted flare x 18" Type-1 pigtail hose to the regulator inlet and the right hand swivel nut to the cylinder valve.

WARNING: The pigtail hose must be installed to avoid tension or pulling stress at either end of the hose.

WARNING: Keep the pigtail hose away from sharp edges of the cylinder collar, rigid corners, walls, doors, or other compartment structures including the cover.

Main Supply Hose - Low Pressure

The main supply hose will be attached from regulator to brass manifold fitting in frame of coach. Swivel brass nut on main hose will be your final attachment. Several things to remember each time container is removed:

Fig. 4-18

1. Be sure ALL fittings are tight.
2. Be sure ALL connections are tested with leak solution.
3. Open main valve slowly to avoid fast rush of gas to excess flow valve causing gas freeze up. Should you experience a gas "freeze-up," close main valve and wait 15 minutes before trying again.
4. Listen carefully - a "hissing" sound longer than one second may indicate a gas leak. Close valve and search for leak.

All gas lines have been checked with air pressure. Dealers are required to recheck and adjust Pressure before delivery to customers.

Regulator

The regulator is the heart of your LP gas system, with internal moving parts. Its function is to reduce the high and varied pressure from the LP container to safe and consistent low operating pressure. The inlet is the first stage and reduces container pressure to 10-13 pounds. The second stage will reduce the 10-13 pound pressure to an operating pressure of 11" W.C. (Water Column) or 6.35 oz. of outlet pressure to the coach system. The second stage is adjustable and will need to be adjusted for precise operation. We suggest this normal maintenance procedure be performed once per year. Have only an authorized and competent technician make any adjustments.

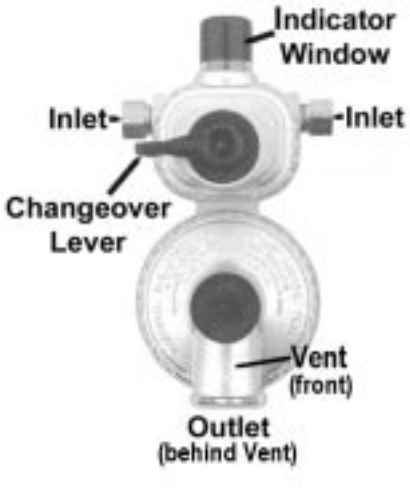


Fig. 4-19

WARNING: LP gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in a compartment have been equipped with a protective cover. Make sure that the regulator vent faces downward and that the cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

Be sure your LP gas regulator is protected from road spray. If water enters the vent in the regulator, it may freeze the pressure controlling diaphragm in the open position so that the container pressure is applied to the appliances - a hazardous condition. Be sure to carefully read the instructions given by the manufacturer of the regulator.

Automatic Changeover Regulator

The automatic changeover regulator allows both gas bottles to be turned on simultaneously. The arrow on the regulator handle indicates which bottle is in service. When the indicated bottle in service becomes empty, changeover is automatically accomplished to commence drawing fuel from the other bottle. At this point, the plastic window will display a red signal or flag to indicate the condition. The lever should then be flipped over to indicate service on the other bottle. The first bottle which was depleted can then be turned off, uncoupled and taken to be refilled without disturbing the RV gas supply. After refilling, it can be removed and again turned to the "ON" position. When the other bottle is depleted, the LP gas supply will again be automatically changed back to the first bottle.

Operation

After the camper is completely set up and you are prepared for camping enjoyment, follow these steps for LP gas operation.

1. Close all burner valves, controls and pilot light valves.
2.

Open main valve on LP container slowly to avoid a fast rush through the excess flow valve causing "gas freeze." Should you experience a gas "freeze-up," close the main valve and wait 15 minutes before trying again.

3. Listen carefully as gas begins to flow. If "hissing" is heard for more than one or two seconds, close valve and search for leak.
4. Light appliances as needed and directed in the appliance chapter.

WARNING: Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreation vehicle. The use of this equipment inside the recreation vehicle may cause fires or asphyxiation.

WARNING: It is not safe to use the cooking appliance for comfort heating. Cooking appliances need fresh air for safe operation. Before operation:

1. Open overhead vent or turn on exhaust fan.

2. Open window.

This warning label has been located in the cooking area to remind you to provide an adequate amount of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreation vehicle, and proper ventilation when using the cooking appliance(s) will avoid danger of asphyxiation. It is especially important that cooking appliances not be used for comfort heating, as the danger of asphyxiation is greater when the appliance is used for long periods of time.

Checking for Leaks

Please refer to Chapter 1, "Safety in Using LP Gas."

IF YOU SMELL GAS

1. Make sure everyone is out of the RV.
2. Extinguish any open flames, pilot lights, and all smoking materials.
3. Do not touch electrical switches.
4. Shut off the gas supply at the tank valve(s) or gas supply connection.
5. Open doors and other ventilating openings.
6. Leave area until odor clears.
7. Have the gas system checked and leakage source corrected before using again.

LP Gas Consumption

Most gas appliances are operated intermittently. Unless there is heavy use of hot water, the water heater consumption is minimal. During freezing weather and high wind conditions, furnace consumption can be extremely high.

LP gas consumption depends upon individual use of appliances and the length of time operated. Each gallon (3.86 liters) of LP gas produces about 91,500 BTUs (46,514 kilojoules) of heat energy. Following is a list of typical appliance consumption when turned on fully for one hour of operation:

Appliance	Approximate BTU Consumption Per Hour	Approximate Kilojoules Per Hour
Water Heater	12,000	12,660
Refrigerator - N611	1,500	1585
Slide-in Cooktop - 3 burner	22,000	23,200
Range w/ Oven	29,100	30,700
Furnace	16,000 - 35,000	16,880 - 36,930

NOTE: This chart is an example of a typical system and may not represent the exact system in your particular unit.

If you have double bottles on your travel trailer, use only one at a time. Otherwise the gas supply will be drawn equally from both bottles until the supply has been totally exhausted. Using one bottle until it is empty, then using the second bottle will allow you to fill the empty bottle at your convenience without being totally out of LP gas.

LP DETECTOR

All recreation vehicles with an LP gas system with propane consuming appliances require a propane leak detection device for safety protection. A converter or auxiliary battery is required to supply 12-volt DC energy to operate the leak detector.

WARNING: Limitations of propane/methane gas detectors:
•This detector will not work without power. Examples causing no power are: an open circuit breaker, a faulty power line connection, a blown or missing fuse.
•This detector will only indicate the presence of propane or methane gas at the sensor. Explosive gas may be present in other areas.
•This detector may not be heard. The alarm loudness is designed to meet or exceed regulatory standards, however, the alarm may not be heard if detectors are located in remote locations or behind closed doors. The alarm may not be heard by persons who are hard of hearing.
•This detector is not suitable as a smoke or fire detector.
•This detector is not suitable for installation in hazardous areas as defined in the national electrical code.

Operation

Power ON Warm Up: When power is first applied the yellow LED will flash for three minutes while the detector is warming up. At the end of that time the LED will turn Green indicating full operation. If the detector has detected unsafe levels of gas it will immediately go into alarm.

CAUTION: This detector cannot sound an alarm during the three minute warm up cycle.

Testing

WARNING: Do not use a cigarette lighter. The butane gas may damage the sensor.

WARNING: Test the operation of this detector after the vehicle has been in storage, before each trip and at least once per week during use.

Simply press the TEST switch (Fig. 4-20) any time during the warm up cycle or while in normal operation. The LED should flash RED and the alarm should sound. Release the switch. This is the only way you should test your detector. This test feature checks the full operation of the detector. If this detector does not test properly return the detector immediately for repair or replacement.

Fig. 4-20

Alarm

The red LED will flash and the alarm will sound whenever dangerous levels of gas are detected. The detector will continue to alarm until the gas clears or the MUTE switch is pressed.

PROCEDURES TO TAKE DURING AN ALARM

1. Turn off all gas appliances (stove, heaters, furnace). Extinguish all flames and smoking material. Evacuate - leave doors and windows open.
2. Turn off the propane container valve.
3. Determine and repair the source of the leak. Seek professional help if necessary.

C CAUTION: Do not re-enter the unit until the problem is corrected.

ALARM MUTE

This feature is activated by pressing the TEST/MUTE button when the detector is in alarm.

1. The audible alarm signal will stop.
2. The red LED will remain on until the gas level has dropped below the alarm point at which time the LED will turn green.
3. If dangerous gas levels return before the end of the mute cycle (about 90 seconds), the alarm will reactivate.

Malfunction Alarm

A fault in the sensor operation will activate the malfunction alarm. The LED will turn yellow and the sounder activate.

NOTE: In the event of a malfunction alarm, remove the alarm immediately and return it for repair or replacement.

Low Power Operation

This detector will operate normally down to 8-volt DC. Do not operate this detector below 8-volt DC.

Maintenance

See Chapter 7 for a list of maintenance items.

ELECTRICAL SYSTEM

General

The electrical system in your travel trailer is composed of 120-volt AC (alternating current) and 12-volt DC (direct current) capabilities. All installations are made in compliance with safety requirements of ANSI standard A.1192, National Electric Code, and Canadian Standards Association.

All conventional travel trailers and fifth-wheel travel trailers will have 30-amp service pre-wired into breaker box.

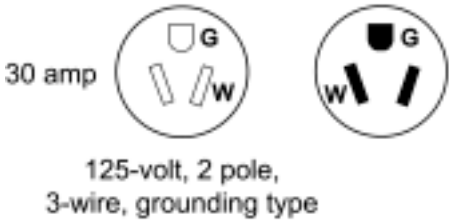


Fig. 4-21

Changes, Modifications and Additions

Any changes or additions made after delivery may cause a hazardous condition. Consult your local authorized dealer prior to making any changes, modifications or additions. Only qualified electrical technicians should attempt to make changes or additions to the electrical system, using only approved materials, components, and employing approved methods of installation, which meet safety and code requirements.

C CAUTION: Any electrical installation that does not meet the criteria of the manufacturer's specification will VOID THE WARRANTY on the electrical system.

120-Volt AC System

Power Cord

Your travel trailer is equipped with a 30-amp rated power cord pre-wired into the breaker box. By opening the cable hatch door you can pull the power cord out from the compartment and attach it to a power source. The power will enter through the main breaker and is distributed through the circuit breakers to wall receptacles and any appliances wired directly as an air conditioner would be. The cord extends approximately 20'-23' (7 to 10 meters) from the travel trailer depending on floor plan.

Fig. 4-22

To prevent accidental electrical shock, insure that the ground pin on the attachment plug cap is intact to the earth ground through the RV park receptacle. When plugged into a receptacle with no provision for the third pin, use an adapter with a pigtail that can be connected to the receptacle box, with the grounding circuit completed through the ground pin or RV park receptacle box. Any accidental short of a live circuit conductor will trip the circuit breaker indicating a shorted circuit. You should be certain that the polarity of the external power is not reversed, in order to avoid harm to appliances and personal electrical shock. Polarity indicators may be purchased in most electrical and hardware stores.

It is strongly recommended to avoid the use of extension cords. If an extension cord is used, it MUST be the same amperage rating as the RV power cord. Using an improper extension cord will

cause overheating of the cord and equipment as well as possibly causing premature failure of the AC equipment.

WARNING: Do not use an adapter, cheater or extension cord that will break the continuity of the grounding circuit connected to the third pin. NEVER remove the grounding pin to connect a non-grounded, two-prong receptacle. Any deviation from this will potentially cause a fire from overheating.

GFCI

Each travel trailer has a GFCI receptacle installed. These initials mean "Ground Fault Current Interrupter." This special receptacle has been designed to reduce the possible injury caused by electrical shock.

Fig. 4-23

An example of ground fault current is the current which would flow through a person who is using or touching an appliance with faulty insulation and, at the same time, is in contact with an electrical ground such as a plumbing fixture, wet floor, or earth.

This GFCI receptacle will not protect against short circuits or overloads. The circuit breaker or fuse in the electrical panel which supplies power to the circuit provides this protection.

When this GFCI receptacle is tripped, it has interrupted ground fault current caused by such things as faulty insulation or wet wiring inside some appliance or equipment connected to the circuit. The faulty equipment should be repaired before is it used again.

This special receptacle should be tested monthly while the travel trailer is being used.

TESTING INSTRUCTIONS

1. Plug a lamp or radio into the receptacle on the face of the GFCI.
2. Push and release the RESET button.
3. The lamp should light at this time.
4. Press the TEST button.
5. RESET button should pop out indicating "Trip" and the lamp should go out. (If the GFCI is manufactured with an indicator light, the light should glow when the device has tripped.)
6. If the GFCI did not trip, do not use. Call a qualified electrician to service or replace the receptacle. The ground fault protection is no longer working and the GFCI may not be working properly.
7. To restore power after tripping, press in the RESET button. It must remain in. (If an indicator light is furnished, it will be off.)

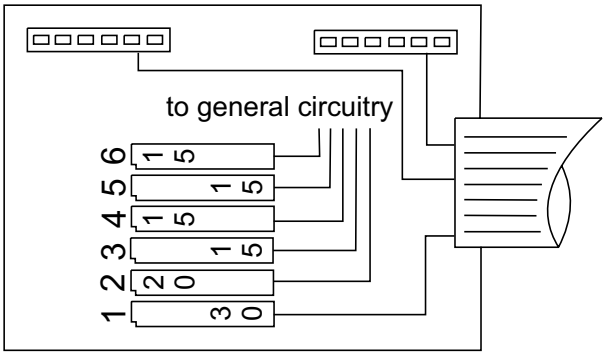
30-amp Service

On a 30-amp system, up to 5 circuits are permitted to distribute power through the travel trailer. All breakers are sized according to power to be consumed.

WARNING: Do not replace breakers or fuses with any that are rated at a higher amperage. Over fusing may cause a fire by over heating the wire.

Below is a generic drawing with circuit breaker alignment. Your travel trailer may not be exactly the same as shown depending on model, floor plan, and options.

Fig. 4-24



1	=	30-amp main, incoming power to coach
2	=	20-amp circuit to air conditioning
3	=	15-amp microwave oven
4 & 5	=	15-amp to general purpose circuits
6	=	15-amp service for optional water heater or it may feed double pole, double throw switch. This means the owner must choose whether to use 120-volt water heater or washer-dryer option

Consumption of 120-volt AC Power

As owners desire and purchase more appliances as we have in our home, we must remember a travel trailer has only 30-amps of incoming power available. Conserving and choosing which appliance has priority in consumption needs to be part of planning.

In addition, loose items such as toasters, skillets, coffee pots, etc. are often included in traveling cargo. Include these in your consumption planning.

12-Volt DC System

The 12-volt DC system is composed of numerous items such as converter, battery, fuses, wire, and bulbs, both interior and exterior lighting. Explanation on these items will follow in this section.

CAUTION: For the breakaway switch to be operational, an auxiliary battery needs to be installed. Consult with your dealer to purchase the battery and have it installed.

C CAUTION: Your RV has many 12-volt DC loads. When combined, they total more power consumption than is available with the 12-volt DC converter. Periodic overloads can be handled with the additional auxiliary battery for short periods of time. It is suggested to conserve your 12-volt DC system at most times. Prolonged overload may shorten the performance life of converter.

Converter

A converter utilizes 120-volt AC power and transforms this energy into 12-volt DC power, which is used inside of your travel trailer. 12-volt DC energy supplies power to all interior lights and various appliances. The floor plan, and size of the travel trailer dictates the model and output size of the converter required.

Inside of the converter is an electronic device which automatically switches between 120-volt AC incoming power and battery power. An auxiliary battery as correctly installed will be charged when the travel trailer is connected up to 120-volt AC power. The converter will supply power through the fuse panel located near by, possibly in the same compartment.

Auxiliary Battery (Dealer Installed Option)

All Jayco conventional travel trailers and fifth-wheel travel trailers are designed and built to accept a battery. A deep cycle marine type is recommended as you need longer energy rather than cold cranking power. A battery is required to operate the breakaway switch and is also available as a source of energy when traveling and camping.

All battery packages require an "in-line" fuse and holder attached to the battery for protection.

Maintenance on a battery is required for longer life. First, all terminals need to be kept clean and free of corrosion. Second, a battery that is used daily or has the converter in operation will consume water. Keep the battery filled as the cells cannot hold a charge when the water is low. A deep cycle battery is NOT maintenance free.

In normal conditions a converter will not overcharge a battery unless (a) the battery has low or dead cell(s), or (b) converter has a malfunction. The charging module on some converters have a positive shut-off and on others there is a reduced charge rate to a very low amperage.

A fully charged battery will read 12.7-volt DC and 1.265 specific gravity at 80øF (32øC). A battery is considered discharged at 11.8-volt DC by electronic standards. When the voltage drops below these levels, permanent damage will occur.

The interior lights will operate from the converter and/or auxiliary battery. Some lights will have wall switches and others will have switches in the fixtures themselves.

The RV battery is installed in parallel circuitry with the battery on your tow vehicle. Both batteries supply power to your RV, so it is important not to discharge the tow vehicle battery below the level of power required to start the engine. To prevent this occurrence while parked, you should disconnect the wiring harness between the RV and tow vehicle or install a battery isolator (see below). When the engine is operating with the RV connected, the vehicle's charging system will charge both the vehicle battery and the auxiliary battery.

Battery Isolator (For Tow Vehicle)

A battery isolator should be installed for two purposes. First it receives current from the alternator and controls distribution of energy to both batteries. Secondly, it serves as a check valve to prevent

energy from being drawn from tow vehicle chassis battery. Energy in the tow vehicle is now preserved to start your engine.

Two types of isolators are available, mechanical and solid state. Each type has an amperage rating (70-amp per side) to indicate it's capacity of operation. The solid state type of isolator, although typically more expensive, will provide the best overall performance. Your dealer can assist you with purchase and installation.

Exterior Lights

All exterior lights are energized by the tow vehicle power, such as tail lights, clearance lights, turn signals, brake lights, etc. When attaching wire leads to a tow vehicle, carefully and tightly tape all connections for moisture protection.

Refer to diagram (Fig. 4-25) for the color code of the seven wire harness and connector. The connector between the tow vehicle and your travel trailer may build up corrosion with extended use, and should be cleaned periodically to insure good electrical contact.

White	1	Ground
Blue	2	Brakes
Green	3	Running Lights
Black	4	Interior 12-volt Lighting
Red	5	Stop & Left Turn
Brown	6	Stop & Right Turn
Yellow	7	Back Up

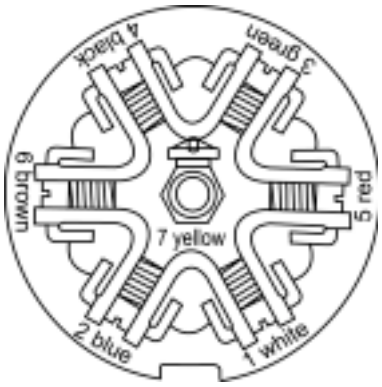


Fig. 4-25

Porch Light

Any porch light on either sidewall will have switches located on the wall inside of the entrance door.

Front convenience lights on Fifth-Wheel Travel Trailers or Conventional Travel Trailers will have a switch included with the light assembly and fused through the fuse panel.

Television Cable

The television cable is rated RG-6.

Fuse and Bulb Chart

Fuses: All fuses for the interior of coach and external porch lights are located in the fuse panel. This panel is located near the converter.

WARNING: Do not replace circuit breakers or fuses with a higher current rating than those supplied with the new camper. Over-fusing can cause a fire hazard by overheating the electrical wiring.

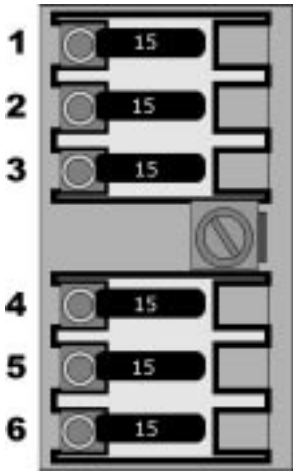
BULBS

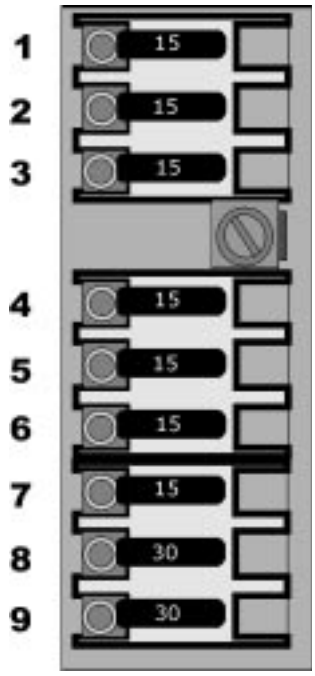
Interior:	Square lights #921	**Exterior**:	Porch Light #912
	Power Hood Lights #912		Tail Light #1157
	Brass Light #1076		Turn Signal & Brake #1157
			Backup Light #1156
			Clearance Light #194

DC Fuse Panel Layout

NOTE: Below is a typical wiring layout. Your individual travel trailer may be different.

Position	Circuit No.	Fuse Size	Designation
6 Positions	1	15	Bath
(Fig. 4-28)	2	15	Pump/Monitor Panel/Range Hood
	3	15	Refrigerator/Furnace
	4	15	Bedroom Lights
	5	15	TV/Radio
	6	15	Ceiling Lights
9 positions	7	Opt.	Optional
(Fig. 4-29)	8	15	Slideout Lights
	9	Auto 20	Slideout Motor





Brakes

The electric brakes operate on 12 volt DC power from tow vehicle through blue and white wires on 7 way pigtail and harness. More information on the brakes is found in Chapter #3.

Chapter 5

APPLIANCES

GENERAL

WARNING: If the manufacturer's operation and care instructions are not followed precisely, a fire or explosion may result causing property damage, personal injury or loss of life.

All appliances in your Jayco RV are name brand quality built equipment, guided by current code and standards. For gas operation, the appliances in your travel trailer will operate on LP gas only, not on natural gas. All safety precautions for LP gas from Chapter 4 must be followed during operation of the appliances. Please familiarize yourself with them before proceeding.

This owner's manual covers basic appliance operation only. Make sure you read all manuals provided by the appliance manufacturer which are included with each travel trailer. These manuals provide extensive information for your safety and the proper operation of the appliances.

For Your Safety (Read Before Operating)

1. Prior to operation, smell the area around the appliances to ensure that gas has not settled on the floor.
2. **WHAT TO DO IF YOU SMELL GAS**
   - **Extinguish any open flames.**
   - **Evacuate all persons from the vehicle.**
   - **Shut off the gas supply at the gas container or source.**
   - **Do not touch any electrical switch or use phone or radio in the vehicle.**
   - **Do not start the vehicle's engine or electric generator.**
   - **Contact the nearest gas supplier or qualified service technician for repairs.**
   - **If you cannot reach a gas supplier or qualified service technician, contact the nearest fire department.**
   - **Do not turn on the gas supply until the gas leak(s) has been repaired**.
3. Use only your hand to turn a gas control valve. Never use tools. If the valve will not turn by hand, do not try to repair it. Call a qualified service technician. Using force may result in a fire or explosion.
4. Do not use the appliance if any part has become wet. Immediately call a qualified service technician to inspect and replace any part of the control system and gas control which has been under water.
5. Do not store or use combustible materials or liquids near or adjacent to any appliance. Appliances shall not be installed in any location where flammable liquids or vapors are likely to be present.
6. Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Refer to installation instructions provided by the manufacturer or each appliance. Installation and service must be performed by a qualified installer, service center or gas supplier.
7. Shut off all gas appliances and pilot lights when refueling gasoline tanks, LP tanks, or when vehicle is in motion.

FURNACE

The furnace requires both 12-volt DC and LP gas energy for full operation. The combustion system is fully sealed. Oxygen is drawn from outside through the center port of the vent by the fan motor. After burning fuel, the carbon monoxide exhaust is expelled into open air through the outer port of the vent. This vent is NOT to be altered or obstructed in any manner to ensure your personal safety.

In order for the furnace to operate, a fully charged 12-volt DC battery or 120-volt AC power through a converter must be available.

Thermostats (Fig. 5-1) are generally installed on an inner wall of a cabinet.

Fig. 5-1

Operating Instructions

WARNING: Do not operate the furnace while the vehicle is in motion or being towed.

WARNING: This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not light the burner by hand.

NOTE: During initial firing of this furnace a burn-off of excess paint and oils remaining from the manufacturing process may cause "smoking" for 5 - 10 minutes.

1. **STOP!** Read User's Information Manual supplied with furnace.
2. Turn the manual valve (if so equipped) or the valve at the outside LP tank to the "OFF" position. Do not force.
3. Move "OFF" lever located at the bottom of the thermostat to the "ON" position.
4. Set the thermostat above room temperature to begin blower operation. A slight delay will occur before the blower comes on. Allow the blower to run for 5 minutes for combustion chamber purge cycle.
5. After 5 minutes, move thermostat lever below room temperature. Blower will remain on. Wait approximately 2 minutes for blower to go off.
6. Open manual shut-off valve (if so equipped) or the valve at the outside LP tank. Correct operating characteristics depend on the valve being positioned fully open. Never attempt to operate with a valve partially closed.

   NOTE: This furnace is equipped with a valve shut-off switch with switch in "OFF" position. Gas will not flow to burner nor will the furnace operate.

7. Set thermostat to desired setting.

   NOTE: Motor will not come on instantly. Allow approximately 30 seconds for motor operation gas flow and sparks.

8. Allow 30 seconds for main burner to light after blower comes on. This furnace is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
9. If burner does not light, repeat steps 1 through 8.
10. If after three (3) attempts with no ignition, go to shut down and contact your dealer or a local recreation vehicle service agency. Do not continue to cycle furnace through thermostat in an attempt to get ignition.

NOTE: If furnace should lock out, the blower will go in 5 minutes and remain off until unit is reset by reactivating thermostat.

To Turn Off Gas to Appliance

1. Set the thermostat to the lowest setting, then move the "ON/OFF" lever located on the bottom of the thermostat to "OFF" position.
2. Turn off all electric power to the appliance if service is to be performed.
3. Turn manual valve (if so equipped) to the "OFF" position. Do not force.

Maintenance

See "Furnace Maintenance" in Chapter 7.

Ducting and Return Air

All heat discharges, registers and return air grills must be free and clear of obstructions. Obstructions will prevent the furnace from performing correctly. This includes all closable registers that are intended to reduce air flow, not shut it off completely.

RANGE AND OVEN OPERATION

WARNING: CARBON MONOXIDE POISONING

- **Do not use any cooking appliance for space heating because of potential danger to occupants of the vehicle and damage to operating components of the range or cooktop.**
- **A window or air vent should be open slightly while using any cooking appliance. Gas flame consumes oxygen which must be replace to assure proper combustion.**

WARNING: Atwood and Wedgewood gas operated cooking appliances are for use with LP gas only, and for installation in recreation vehicles only (e.g. Travel trailer, motorhome, folding camping trailer, etc.

NOTE: Have the dealer show you where the main gas shut off valve is located so that you will know how and where to turn off the gas supply when necessary.

Top Burner Operation

WARNING:

- **Use range or cooktop only for use as described in the manufacturer's manual.**
- **Do not leave children alone or unattended in area where range or cooktop is in use. Never allow anyone to sit, stand, or on any part of the range cooktop. They could be burned or injured.**
- **Do not store things children might want above the range or cooktop. Children could be burned or injured while climbing on it.**
- **Do not wear loose or hanging garments when using the range or cooktop. They could ignite if they touch an open flame and you could be burned.**
- **Use only dry potholders. Moist or damp potholders on hot surfaces may result in burns and container particles may cause injury.**
- **Do not use the range or cooktop for warming or heating the vehicle. You could be burned or injured, a fire could start, or deplete the oxygen in the vehicle.**
- **Do not operate range or cooktop if it is damaged or not working properly.**
- **Know where your vehicle's main LP gas shutoff is located.**
- **Verify sufficient gas supply before attempting to light any top burner. Air in the gas supply line will significantly delay burner ignition, and a burner may light unexpectedly as the air in the line clears out and is replaced by LP gas; this unexpected ignition may burn you. Air may be introduced into the supply line when the vehicle gas bottle is replaced, during servicing of other gas appliances, etc.**
- **If any burner should extinguish (after initially lighting or due to accidental blow-out), turn all burner knobs clockwise to OFF and WAIT FIVE (5) MINUTES before again attempting to light the burner.**
- **DO NOT touch top burners, burner grates, or other areas near top burners during and after use. Do not let clothing or other flammable materials to contact top burners or areas near top burners until they have had sufficient time to cool.**
- **Make sure the utensils you use are large enough to contain food and avoid boil overs and spillovers. Heavy splattering or spillovers left on the cooktop can ignite and burn you.**
- **DO NOT drop pans on the porcelain surface. Cracks or chips in the porcelain surface may result.**
- **Be sure that glass cooking utensils are suitable for surface or top burner use without breaking due to the sudden changes in temperature.**
- **Never leave top burners unattended. A boil over could result and cause smoking and greasy spillovers that may ignite.**
- **Turn pan handle inward, but not over other top burners. This reduces the chance of burns due to bumping pan.**
- **Grease is flammable. Never allow grease to collect around top burners or on cooltop surface. Wipe spillovers immediately.**
- **DO NOT use water on grease fires. Never pick up a flaming pan. Smother a flaming pan with a tight fitting lid or cookie sheet. Flaming grease outside of the pan can be extinguished with baking soda or a multipurpose dry chemical or foam-type fire extinguisher.**
- **Use care when lighting a top burner by hand. If the burner lights unexpectedly, or your hand is close to the burner, you may be burned.**

WARNING:

- **Burner flame should not extend beyond the edge of the cooking utensil. The flame could be burned or a fire could start if a burner is accidentally left ON.**
- **Be sure all control knobs are turned to OFF when you are not cooking. Someone could be burned or a fire could start if a burner is accidentally left ON.**
- **Do not heat unopened containers. They could explode. The hot contents may cause burns and container particles may cause injury.**
- **Do not store flammable materials on, in, or near range or cooktop. Any fumes can create an explosion and/or fire hazard.**

NOTE: Check that the gas is on at the shutoff valve.

LIGHTING TOP BURNERS:

a. All burner controls operate counter clockwise and must be pressed inward (toward the cooktop) to turn ON or LITE. Do not attempt to light more than one burner at a time.
b. IMMEDIATELY light the burner by holding a lit match or a hand held spark igniter designed for this purpose near the burner ports.
c. To extinguish the top burner flame, turn the appropriate burner knob clockwise to OFF.

LIGHTING TOP BURNERS WITH SPARK IGNITION:

a. Turn the appropriate burner know counter-clockwise to ON or LITE. Do not attempt to light more than one burner at a time.
b. Turn the SPARK knob clockwise one "click". If the burner fails to light, continue turning the SPARK know clockwise until the burner lights.
c. To extinguish the top burner flame, turn the appropriate burner know clockwise to OFF.

LIGHTING TOP BURNERS WITH ELECTRONIC IGNITION:

a. Turn the appropriate burner knob counter-clockwise to ON or LITE. This will automatically activate the ignition system, and all burners will begin to spark repeatedly. This is the "clicking" sound you will hear.
b. The burner will light within (5) seconds. Once the burner is lit, turn the knob counter-clockwise to the desired setting.
c. To extinguish the top burner flame, turn the appropriate burner knob clockwise to OFF.
d. If 12-volt DC power is not available to the ignition module for any reason, the top burners will be lit manually. See instructions in "Lighting Top Burners" (above).

CAUTION: Do not cook with the control knob set in the LITE position. Damage to the ignition module and burner electrodes may result.

Ranges are supplied with proportional flow (linear) top burner valves. Start cooking at the HI setting, then turn the control knob counter-clockwise to continue cooking to obtain best results. Use the following table as a guide until you get used to the setting.

SETTING	RECOMMENDED USE
LITE	• To light the burner
HI	• To start foods cooking • To bring liquids to a boil
MED 9-6	• To hold liquids at a boil • To fry chicken or pancakes • To cook large amounts of vegetables
LOW 5-Low	• To keep food warm

CAUTION:

- Do not use oversized cookware. The pan should not be more than one inch larger than the burner grate. The maximum pan size is a 10" skillet. Oversized cookware will cause excessive heat build-up in the stove top and will result in damage to the burner grate, burner and cooktop.
- Do not use a broiler pan, griddle, or any other large utensil which covers more than one (1) top burner at a time. This will create excessive heat which may cause melting, sooting, or discoloration damage to the burner grates, range top, or utensils.
- Do not leave an empty utensil, or one which has boiled dry, on a hot top burner. The utensil could overheat and damage the utensil or the cooking appliance.

Oven Operation

WARNING:

- **Do not touch any inner or outer surfaces of the oven or oven door, or the wire rack inside, or any utensils inside the oven during and after use until these areas have had sufficient time to cool. You could be burned or injured. During and after use, do not let clothing or other flammable materials contact these areas until they have had sufficient time to cool.**
- **Do not cover the ventilation holes in the oven broiler shelf (shelf above oven burner). The air circulation inside the oven will be interrupted and cooking times will vary from normal; food may be burned or undercooked.**
- **Do not cover the oven vent openings while the oven is in operation; restricting the flow of combustion air may create a carbon monoxide poisoning hazard.**
- **If oven pilot should extinguish after initial lighting or due to accidental blowout, turn oven knob clockwise to OFF and wait five (5) minutes before again attempting to light oven.**
- **Do not touch the outer surface of the oven door or the oven vent while the oven is in use. These areas become hot enough to cause burns. During and after use, do not let clothing or other flammable materials contact these areas until they have had sufficient time to cool.**
- **Do not use oven as a storage area.**

NOTE: Check that gas is on at shutoff valve.

LIGHTING THE OVEN PILOT:

a. Push in oven control knob (Figure 5-2A) and rotate counter-clockwise to PILOT ON.
b. Light oven pilot (Figure 5-2C) located near the back of the oven, under the broiler shelf (Figure 5-2B) and to the left of the oven burner (Figure 5-2D).
c. Set the oven control knob to PILOT ON to maintain pilot flame. The oven and broiler are now ready for operation; see "Lighting the Oven Burner" below before proceeding. The oven pilot has been factory set and requires no further adjustment.
d. To extinguish the oven pilot, push in the oven control knob (Figure 5-2A) and rotate clockwise to OFF. Extinguish all pilots when refueling or traveling.

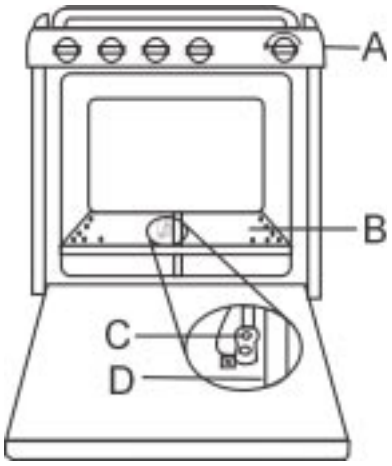


Fig. 5-2

LIGHTING THE OVEN BURNER:

a. Light the oven pilot as described in "Lighting the Oven Pilot" above.
b. With the oven control knob set to PILOT ON, push in and rotate the knob counter-clockwise to the desired temperature setting or to BROIL. The oven will pre-heat in approximately 10 minutes. For best results always pre-heat the oven before use.
c. The oven is equipped with a safety ignition system that requires a minimum of 30 seconds to operate after turning the oven control ON. This delay is normal.
d. To extinguish the oven burner, rotate the knob clockwise to PILOT ON. The oven pilot will remain lit.
e. For complete shutdown, push in and rotate the knob clockwise to OFF.

USING THE BROILER:

a. Light the oven pilot as described in "Lighting the Oven Pilot" above.
b. Push in and rotate the oven control knob counter-clockwise to BROIL.
c. Center a broiler pan under the broiler flame.
d. Move and turn the food over frequently to ensure even browning and cooking.

NOTE: Cooking times will be longer at higher altitudes (+4000 feet).

WATER HEATER

Safety Information

WARNINGS:
Hydrogen gas may result if you have not used this heater for two weeks or more. HYDROGEN GAS IS EXTREMELY FLAMMABLE. To reduce the risk of injury under these conditions, open the hot water faucet for several minutes at the kitchen sink before you use any electrical appliance connected to the hot water system. If hydrogen is present, you probably will hear an unusual sound such as air escaping through the pipe as the water begins to flow.

Hydrogen gas may be present even after water has been drained from the tank. Open faucet at sink and allow system to vent for several minutes (5-10 minutes).

Do not smoke or have any open flame near the open faucet. Do not attempt to light pilot or main burner. On DSI models, be sure the switch is "OFF".

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

Do not alter the operation of your water heater nor change the design/construction of your water heater. Accessories are being marketed by RV products which we do not recommend. For your safety, only factory authorized parts are to be used on your water heater.

Periodically inspect the vent for obstructions or presence of soot. Soot is formed whenever combustion is incomplete. This is your visual warning that the water heater is operating in an unsafe manner. If soot is present, immediately shut the ater heater down and contact your dealer or a qualified service person.

When considering add-on rooms, porch or patio, attention must be given to the venting of your water heater. For your safety, do not terminate the vent on your water heater inside add-on rooms, screen porch or onto patios. Doing so will result in products of combustion being vented into the rooms or occupied areas.

Never operate the heater if you smell gas. Do not assume that the smell of gas in your RV is normal. Any time you detect the odor of gas, it is to be considered life threatening and corrected immediately. Extinguish any open flames including cigarettes and evacuate all persons from the vehicle. Shut off gas supply at LP gas bottle. (See safety notice at the beginning of this chapter.)

WARNING: Make sure water heater is filled with water before power is turned on. Even momentary operation of heater without water in it will burn out the element.

NOTE: Always open both the cold and hot water faucets when filling vehicle water tank to allow air pockets to be forced out of the water heater. When water flows from the heater faucets, close both faucets.

Be sure the power is "OFF" to the water heater ignition system during any type of refueling and while vehicle is in motion or being towed.

The thermostat on your water heater is not adjustable. It is a temperature sensing limit designed to maintain a water temperature of 130°F (54°C). Water temperatures over 130°F (54°C) can cause severe burns instantly or death from scalds; therefore, be careful when using hot water. Children, disabled and elderly are at highest risk of being scalded. Always feel water before bathing or showering.

Operating Instructions

- This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- This is an automatic gas valve, no adjustments are necessary. Do not attempt to repair the gas valve. This may result in a fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.
- Before operating water heater, check the location of the vent to make sure it will not be blocked by the opening of any door on the trailer. If it can be blocked, do not operate the water heater with the door open.

1. STOP! Read the safety information provided.
2. Turn off all electric power to the appliance.
3. Turn "OFF" gas supply.
4. Wait five minutes for gas to clear the area. If you smell gas then STOP! Follow instructions in item B of the safety information. If you do not smell gas, go to next step.
5. Turn "ON" gas supply.
6. Turn on electrical power to the appliance.
7. Turn switch to "ON" position. If the burner does not light, the system will automatically attempt two more tries for ignition before lock-out.

   NOTE: Each ignition cycle will have a 15 second purge before spark cycle if system is a three try system.

8. If lockout occurs before main burner lights, turn switch to "OFF", wait five seconds and turn switch to "ON" position. This will restart the ignition cycle. The first start-up of the heater may require several ignition cycles before all air is purged from the gas lines.

If the burner will not come on, the following items should be checked before calling a service person:

1. Switch turned off.
2. Gas supply to heater is empty or turned off.
3. Reset button on ECO is tripped.

Operating Instructions For Units With Electric Element

Electric water heaters are designed to operate with a minimum amount of service problems; however, proper operation and care is essential.

By far the most common trouble with electric water heaters results from energizing the water heater before it is filled with water. Even brief operation of the electric element without water in the tank will burn-out the electric heating element.

To energize the electric heating element, turn the switch to "on". The switch is located behind the water heater door in the lower left corner of the control housing. The water temperature will be regulated by the thermostat. (See section entitled "Thermostat And Manual Reset")

1. Turn switch to "OFF" position.
2. Turn off electrical power to the appliance.
3. Turn off gas supply.
4. If vehicle is to be stored or heater is going to be turned off while subject to freezing temperature, drain water heater. (See "Draining and Storage Instructions")

ANODE PROTECTION

The tank in this water heater is protected by a magnesium or aluminum anode (Fig. 5-3) to prolong the life of the tank. Under normal use, the anode rod will deteriorate and because of this, we recommend it be replaced yearly.

NOTE: Water with high levels of iron and/or sulfate will increase the rate of deterioration; therefore, more frequent replacement may be required.

Operating the water heater without proper anode protection will decrease tank life and will void your warranty on the tank.

NOTE: Tank is drained by removing anode rod (See "Drain and Storage" instructions).

To extend anode life, drain water from tank whenever RV is not being used. Avoid any extended time of non use with water in tank.

Also, refer to section on winterizing.

Fig. 5-3

WARNING! Do not replace the anode rod with any non-Suburban accessory part, such as "add-on" electric heating element. Items such as these are not approved to be installed in Suburban products. They could create an unsafe condition and will also void all warranties.

PRESSURE RELIEF VALVE

The temperature and pressure relief valve (Fig. 5-3) is designed to open if the temperature of the water within the heater reaches 210F, or if the water pressure in the heater reaches 150 pounds. Recreation vehicle water systems are closed systems and during the water heating cycle the pressure build-up in the water system will reach 150 pounds. When this pressure is reached, the pressure relief valve will open and water will drip from the valve. This dripping will continue until the pressure is reduced to below 150 pounds, and the valve closes. This condition is normal and does not indicate a defective relief valve.

WARNING: Do not place a valve between the relief valve and the tank. Do not plug the relief valve under any circumstances.

WATER WEEPING OR DRIPPING FROM PRESSURE RELIEF VALVE

You may experience water weeping or dripping from your water heater's Pressure and Temperature (P & T) Relief Valve when your water heater is operating. Water weeping or dripping from the P & T Valve does not always mean the P & T Valve is defective. As water is heated, it expands. The water system in a recreation vehicle is a closed system and does not allow for the expansion of heated water. When the pressure of the water system exceedst the relieving point of the P & T Valve, the valve will relieve the excess pressure.

Suburban recommends that a check valve not be installed directly at the inlet to the water heater tank. This will increase weeping of the pressure relief valve.

WARNING: Do not remove or plug the relief valve.

One way to reduce the frequency of this occurrence is to maintain an air pocket at the top of the water heater tank. This air pocket will form in the tank by design. However, it will be reduced over time by the everyday use of your water heater.

To replenish this air pocket:

1. Turn off water heater.
2. Turn off cold water supply line.
3. Open a faucet in the RV.
4. Pull out on the handle of the Pressure Relief (P & T) Valve and allow water to flow from the valve until it stops.
5. Release handle on P & T Valve - it should snap closed.
6. Close faucet and turn on cold water supply; as the tank fills, the air pocket will develop.

Repeat this procedure as often as needed to reduce the frequency of the weeping of the P & T Valve. If the weeping persists after following this procedure, you may elect to install an expansion or accumulator tank in the cold water line between the tank and the check valve to relieve the pressure caused by thermal expansion. Contact your local dealer for assistance.

THERMOSTAT AND MANUAL RESET

Models SW6D, SW6DE, SW6DM, SW6DEM: These water heaters are equipped with a high temperature limit as a cut-off device. Temperature above 180°F will cause manual reset button to trip, shutting down the main burner. (Fig. 5-4) To activate the burner, the water temperature must be below 110°F, push the reset button to re-activate the burner.

Models SW6DE and SW6DEM: These water heaters are equipped with a high temperature limit as a cut-off device. Temperature above 180°F will cause manual reset button to trip shutting down the electric element. (Fig. 5-5) To activate the element, the water temperature must be below 110°F, push the reset button to re-activate the element.

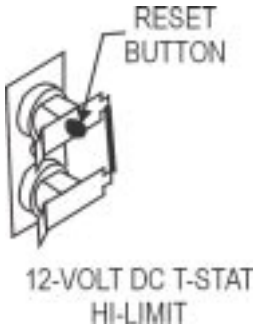


Fig. 5-4

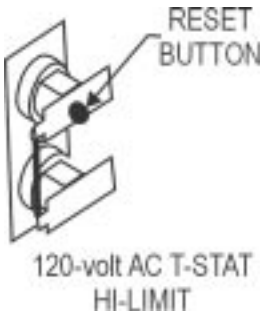


Fig. 5-5

REFRIGERATOR

WARNING:

- **Do not remove the round ground prong from any of the AC power cords. Do not use a two prong adapter or an extension cord with any of the AC power cords.**
- **A circuit overload can result in an electrical fire if the wires and/or fuses are not the correct size. Use only the wire and fuse sizes as a written in the "Installation Manual".**
- **Incorrect installation, adjustment, change to, or maintenance of this refrigerator can cause personal injury, property damage, or both. Have service and maintenance work done by your dealer or by a Norcold authorized service center.**
- **Disconnect both the AC and DC power sources before doing any maintenance work on the refrigerator. All service work on this refrigerator must be done by a qualified service technician.**
- **Do not bypass or change the refrigerator's electrical components or features.**
- **When you discard an appliance, remove all doors to prevent accidental entrapment and suffocation.**
- **Do not spray liquids near electrical outlets, connections, or the refrigerator components. Many liquids are electrically conductive and can cause a shock hazard, electrical shorts, and in some cases fire.**
- **The refrigerator cooling system is under pressure. Do not try to repair or to recharge a defective cooling system. The cooling system contains sodium chromate. The breathing of certain chromium compounds can cause cancer. The cooling system contents can cause severe skin and eye burns, and can ignite and burn with an intense flame. Do not bend, drop, weld, move, drill, puncture, or hit the cooling system.**

CAUTION:

- The rear of the refrigerator has sharp edges and corners. To prevent cuts or abrasions when working on the refrigerator, be careful and wear cut resistant gloves.
- Make sure all fasteners and connections are tight.

About Your Refrigerator:

LEVELING

CAUTION: The refrigerator is made to operate within 3" off level side-to-side and 6" off level front-to-back (as looking at the front of the refrigerator). Operating it at more than these limits can cause damage to the cooling system and create a risk of personal injury or property damage. Make sure the vehicle is level before you operate the refrigerator.

OPERATION DURING TRAVEL

While the refrigerator should be level when the vehicle is stopped, performance during travel is not usually effected.

FOOD COMPARTMENT

Ignite or start up the refrigerator and let it cool for eight hours before loading with food. If the refrigerator does not start to cool down after about two hours, contact your dealer or a Norcold authorized service center.

- For the best cooling performance:
  - Let air move freely inside the entire food compartment.
  - Do not cover the shelves with plastic, paper, etc.
- To decrease the amount of ice that collects on the cooling fins:
  - Cover all liquids and moist foods.
  - Let all hot foods cool before putting them in the refrigerator.
  - Do not open the door any longer than necessary.

FREEZER COMPARTMENT

The freezer compartment is made to keep pre-frozen food frozen and not to quick freeze food. Keep pre-frozen foods in the freezer compartment.

NOTE: Do not put other items on the ice tray while the water is freezing. The water freezes more rapidly if the thermostat is at the COLDEST position.

CRISPER

The crisper is located at the bottom of the fresh food compartment and supply a storage area to preserve fruit and vegetable freshness. Make sure that you always push the crispers fully in.

NOTE: Do not wash the crispers in a dishwasher. The crispers are not dishwasher safe.

DOOR BINS

You may put the door bins of the freezer and fresh food compartment in a location that best meets your needs. To remove the bins, lift them over the locator and pull them forward. TO install the bins, push them onto the locator.

NOTE: Do not wash the door bins and bin slides in a dishwasher. The door bins and bin slides are not dishwasher safe.

ADJUSTABLE SHELVES

The shelves in the freezer and the fresh food compartment are made so you can remove them or move them.

- To remove or move the shelf of the freezer:
  - Pull the shelf forward out of the slot.
  - Push it fully into the slot that you wish.
- To remove or move each shelf of the fresh compartment:
  - Remove the screw from the retainer of each shelf at the rear of the refrigerator.
  - Pull each shelf forward out of the slot.
  - Push each shelf fully into the slot that you wish.
  - Attach the retainer with the screw.

DOOR HANDLES

During travel, the door latch prevents the door from operating. When closing each door, push the door toward the refrigerator until you hear a "click" sound.

To open each door, pull the handle away from the refrigerator.

During storage, the storage latch prevents the door from completely closing. Use it to prevent odors when the refrigerator is stored for an extended period of time.

To operate the storage latch, open each door about 1/2" and push the storage latch into the cutout of the strike plate. Do not use the storage latch as a travel latch because the doors will not be fully closed.

INTERIOR LIGHTS

The interior light is at the top of the fresh food compartment. It comes on only when the refrigerator is on the door is open. To replace the bulb:

1. Remove the DC power supply wires from the power board at the rear of the refrigerator.
2. Remove the cover by pushing it toward the back of the refrigerator.
3. Remove the light bulb from the holder.

NOTE: Use only a GE#214-2 bulb as the replacement bulb. This bulb is available at most retail automotive parts centers.

4. Install the replacement bulb.
5. Install the cover.
6. Connect the DC power supply wires to the power board at the rear of the refrigerator.

BACKUP OPERATING SYSTEM

This refrigerator has a backup operating system. The backup operating system allows the refrigerator to continue to cool if the temperature sensor of the refrigerator should fail.

If this failure occurs:

- The refrigerator automatically changes to the backup operating system.
  - The ON light flashes a fault code. See the "Fault Codes" Section of this manual.
- The backup operating system can over freeze or thaw the contents of the freezer and the fresh food compartment.
  - Make sure the temperatures of the freezer and the fresh food compartment are satisfactory.

NOTE: If you open the door(s) too often, the temperatures inside the freezer and fresh food compartment do not become stable. Allow the refrigerator to operate for about one hour after each adjustment change before you examine the contents. The number "5" is the coldest temperature setting.

  - If the temperature is too warm, push the temperature switch to the right to raise the temperature setting by one number.
  - If the temperature is too cold, push the temperature switch to the left to lower the temperature setting by one number.
- Have the refrigerator serviced by your dealer or a Norcold authorized Service Center as soon as possible.

Operating the Refrigerator Controls

CONTROL PANEL

The refrigerator control panel is between the freezer compartment and the fresh food compartment. To maintain the operating control functions of the refrigerator, a 12-volt DC power supply is necessary. The refrigerator and any other DC components in the vehicle receive DC power from the 12-volt system of the vehicle; either an auxiliary battery, a converter, or the vehicle engine battery.

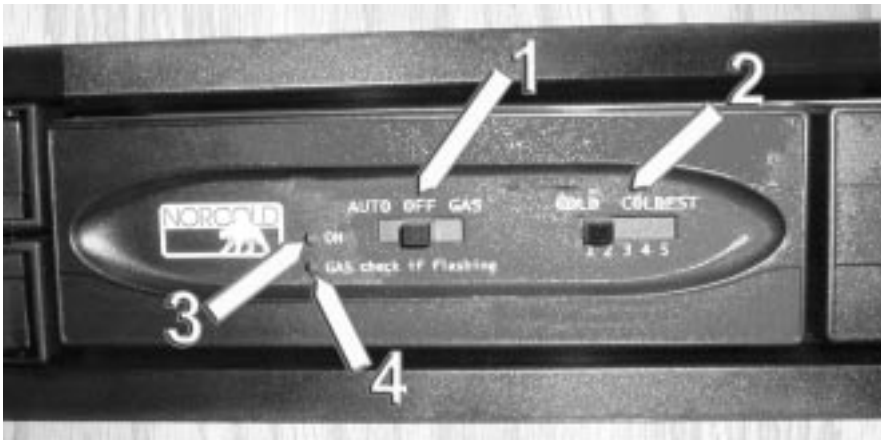


Fig. 5-6

The selector switch starts (Fig. 5-6 - #1) and shuts down the refrigerator;

- Push the selector switch to the AUTO position to start the refrigerator in auto mode.
- Push the selector switch to the GAS position to start the refrigerator on propane gas.

The temperature switch (Fig. 5-6 - #2) controls the temperature adjustment of the freezer and the fresh food compartment. The temperature adjustment that you select does not change if the mode of operation of the refrigerator changes.

- Push the temperature switch to the desired temperature setting.
- The number “5” is the coldest temperature setting.

Refer to the “Display Codes” section of manufacturer’s owner’s manual.

AUTOMATIC MODE OPERATION:

When you select AUTO mode, the refrigerator controls automatically select the most efficient energy source that is available for operation. If a more efficient energy source becomes available, the refrigerator controls change from the current energy source to the more efficient energy source.

The controls select the energy source in this sequence:

- When 120-volt AC is available to the refrigerator:
  - The ON light shows (Fig. 5-6 - #3) in the center display.
  - This means that the refrigerator is operating on AC electric.
- If 120-volt AC is not available to the refrigerator:
  - The ON light and the GAS light (Fig. 5-6 - #3 & #4) show in the center display.
  - This means that the refrigerator is operating on propane gas.

GAS MODE OPERATION

- The ON light and the GAS light (Fig. 5-6 - #3 & #4) show in the center display.

- This means that the refrigerator is operating on propane gas.

If the energy source is interrupted:

- The refrigerator stops operation.
- A fault code flashes in the center display.
- Refer to the "Fault Codes" section of manufacturer's owner's manual.

IGNITION OF PROPANE GAS IN EITHER AUTO OR GAS MODE:

NOTE: On initial start up of the refrigerator, ignition of the propane gas may not occur within 30 seconds.

If ignition of the propane gas does not occur within 30 seconds:

- The gas safety valve of the refrigerator closes.
- The refrigerator stops operation.
- Refer to the "Fault Codes" section of the manufacturer's owner's manual.
- The fault code remains until you push the selector switch to the OFF position and then back to either the AUTO or GAS mode.
- If ignition does not occur after two or three times:
  - Check the gas supply line.
  - Consult your local dealer or an authorized Norcold service center.

AIR CONDITIONER

Operation

FOR COOLING

1. Turn the selector switch to the "LOW COOL" or "HIGH COOL" position.
2. Rotate the thermostat (temperature control) to the position that is the most comfortable to you. The thermostat will turn the compressor on when the temperature of the air entering the air conditioner rises a few degrees above the setting you have selected. Then the temperature of the air entering continues to cycle the compressor on and off in the above mentioned fashion until the selector switch is turned to another mode of operation.
3. Position the louvers to the desired direction the discharge air is to flow.

NOTE: The fan operation is constant, only the compressor cycles on the thermostat.

OPERATION DURING COOLER NIGHTS

It is important, when the outdoor temperature drops in the evening or during the night to below 75°F that the thermostat (temperature control) be set at a midpoint between "warmer" and "cooler". If the setting is at "cooler", the evaporator coil may become iced-up and stop cooling. During the day when the temperatures have risen above 75°F, reset the thermostat switch to the desired setting.

NOTE: Should icing-up occur, it is necessary to let the cooling (evaporator) coil defrost before normal cooling operation is resumed. During this time, operate the unit in the "HIGH FAN" position with the system at maximum air flow. When increased or full air flow is observed, the cooling coil should be clear of ice.

SHORT CYCLING

When an air conditioner is in operation , its compressor circulates refrigerant under high pressure. Once off, it will take two to three minutes for this high pressure to equalize.

The air conditioning compressor is unable to start against high pressure. Therefore, once the air conditioner is turned off, it is important to leave it off for two or three minutes before restarting.

Short cycling the compressor (or starting it before pressures have equalized), will in some instances, kick the circuit breaker or overload.

FOR AIR CIRCULATION ONLY

1. Turn the selector switch for "LOW FAN" or for maximum air flow, to "HIGH FAN".
2. Position the louvers to the desired direction the discharge air is to flow.

NOTE: When the selector switch is in the "LOW FAN" or "HIGH FAN" position, the blower motor will operate continuously.

MONITOR PANEL

The monitor panel (Fig. 5-7) will provide useful information on the capacities of the water tanks and the battery condition. In fifth wheel travel trailers and conventional travel trailers you will find a wall mounted panel as shown. Follow instructions below regarding operation.

The panel operates on 12-volt DC power supplied by the converter or battery. Sensors are installed into the tanks and a resistor assembly relaying a message through wires to the display board on the panel. No power is drawn from the battery unless a switch is pushed or turned on.

Fig. 5-7

Operation

Four spring loaded push button switches are located in the center of panel. Press only one button at a time, as one set of lights serve all functions. As you push any button, one or more lights will come on, indicating the water level of that tank.

When pushing the battery button, the highest light coming on indicates battery condition. C=charging at 12.7 volts; G=good at 11.9 volts; F=fair at 11.2 volts; and L=low at 6.0 volts.

The switch at the lower right is for water pump operation. In the "ON" position, the pump runs until 45 pounds of pressure has been achieved. The red light will stay on. Turn the switch off when the pump is not in use.

The switch in the lower left corner is for direct spark ignition (D.S.I.) water heater operation if the D.S.I. option is built into your travel trailer.

Fuses for the monitor panel operation are in 12-volt distribution center fuse block

Chapter 6

CARE OF BODY COMPONENTS

EXTERIOR ALUMINUM

Your new Jayco travel trailer has an improved smooth metal with a new polyester automotive paint finish. This metal surface may be cleaned and polished as you would your automobile.

C CAUTION: We recommend that you do not take your recreation vehicle through automatic car washes and extreme caution should be used if utilizing any type of pressure sprayer around all attachments, doors, windows, appliance vents, etc. to avoid forcing water inside the unit, possibly damaging components.

All corners or flat trim have putty tape sealer between the trim and aluminum skin. This sealant can be damaged by weather elements for cracking and dry-out conditions. Clean the edges and cap seal the edge of molding and skin surface, using sealant recommended by your dealer. This process should be done at least once per year.

EXTERIOR ROOF

The proper care, cleaning and maintenance of your TPO Roofing is quite simple because of the basic properties and longevity of the material itself.

Periodic cleaning is the primary maintenance. Alpha Systems suggest using Murphy's Oil Soap with a soft nylon brush or sponge. DO NOT USE solid or granulated cleaners, as they will mar the natural finish.

DO NOT USE Armor-All or other oil/solvent base cleaners as they will leave a slick surface.

A good thorough cleaning with some elbow grease and the suggestions above should keep your roof looking good and remove most stains. For more stubborn stains, you should contact your authorized dealer.

If you keep your Royal Tuff-Ply TPO roof clean, you will be performing the primary maintenance necessary to keep it looking good and extend its longevity.

Annual inspection of the roof is suggested. Check the membrane for possible damage and check the caulk/lap sealant used in all termination areas and around all accessories and fasteners.

Royal Tuff-Ply is UV resistant. It will not retain odors or rot.

C CAUTION: All roofs require maintenance. At least once per year, inspect and reseal all seams: front and rear, around all vents, and along all moldings. If you notice any deterioration in the seal, scrape off any cracked or loose sealant and then reseal the area.

STONE GUARD

Wash the stoneguard with liquid dishwashing soap or liquid car washing soap and water. Do not use powdered detergent, powdered soap, liquid and spray cleaners or pressure washing. Wax frequently to protect the surface and make cleaning easier.

ABS PLASTICS

ABS plastic components such as shower walls, tubs and exterior fenders will retain their original beauty with reasonable care.

FOR CLEANING:

1. Dust and wipe clean with soft, damp cloth or chamois, wiping gently.
2. Wax or polish with Simoniz®, Aero-Wax®, or Glo-Coat® using flannel or jersey cloth. After polishing, wipe gently with damp cloth to ground electrostatic charges which may attract dust particles.

Do NOT use gritty or abrasive particle soaps or scouring compound to clean ABS plastic.

CAUTION: Avoid using "Citrus" or biodegradable cleaners which contain "D-Limonene." They will damage plastic materials.

FRAME

The frame of your Jayco recreation vehicle is painted with a water based paint. Road debris will chip the paint, inviting rust and other deterioration. Periodically inspect the exterior exposed areas, clean and repaint the steel members to insure a long life. If damage would occur, the frame needs to be painted with e-coat paint and not a gloss black paint. This type of paint is available in a spray from the vendor, Leland. To prevent rust or corrosion, you may wish to purchase a commercially available rust treatment application.

DOORS, EXTRUSIONS, WINDOWS & VENTS

These components have putty tape between the component and the wall surface. Portions of these items may have a cap seal added as a secondary seal. Inspect these seals at least once per year. Both putty tape and cap seals can become damaged by U.V. exposure, air pollution, freezing temperatures and exposure to the elements.

Locks on entrance and baggage doors need biannual lubrication. Silicone lubricant is recommended. Conditions such as rain, salt, dust and pollution may increase the maintenance needs.

FURNITURE

For Cloth Furniture: vacuum occasionally to remove dirt, dust and pet hair. Have steam cleaned when necessary. Test fabric in an inconspicuous location before using any spot cleaners.

For Synthetic Leather: wipe with a soft damp cloth for most dirt and spills, air dry. If needed, use a small amount of a mild liquid detergent. For oil or grease stains, spray immediately with an all-purpose spray cleaner or Tannery Car Care Cleaner. Take care not to smear beyond the original stain. Rinse with clean water, air dry.

CUSHIONS

CAUTION: Do not dry clean vinyl components. Do not remove covers for dry cleaning.

If the cushions are dry cleaned, the vinyl on the reverse side of the cushion will shrink, become hard and crack. Vacuum the fabric and wipe the vinyl surfaces. The fabric can be gently steam cleaned on the cushions or mats if necessary.

All dinette and bed mat covers are treated with stain protector. Vacuum the cover with a brush attachment periodically to remove dirt.

BEDSPREADS

Dry clean only.

WINDOW TREATMENTS

The window treatments of your recreation vehicle include mini blinds and valances.

Window Treatments	Light Cleaning	Extensive Cleaning
Mini Blinds	Dust or Vacuum	May be removed and washed with a mild detergent and warm water
Valances	Vacuum	

CAUTION: To prevent scorching of the window shades, do not use the swivel arm lamps located adjacent to the slideout if one of the lampshades is broken or missing. Remove the light bulb and contact a qualified service center for repairs or replacement.

SHOWER CURTAIN AND LINER

The shower curtain is made of a cotton or cotton/polyester material and should be dry cleaned. The shower curtain liner should be cleaned as you would clean your own shower curtain liner at home.

TIRE COVERS - VINYL (OPTION)

To minimize the possibility of the tire "bleeding" through onto the tire cover, use a separator (garbage bag, paper cloth, etc.) between the tire and cover.

PANELING

The wall paneling in your travel trailer is a vinyl covered wood panel. If deep scratches occur, putty sticks can be used to cover them. These can be obtained from hardware stores and lumber yards. For decor paneling, replacement vinyl covering can be purchased for repairs if needed. Your dealer's parts department can assist you with this.

To clean, use a mild solution of soap and lukewarm water with a soft sponge or cloth. DO NOT use abrasive cleaners. It could cause the vinyl to scratch and turn dull. Grease spots and stubborn dirt can be cleaned off with an all-purpose spray cleaner. Harsh cleaners and organic solvents can attack the printed vinyl and, therefore, are not recommended.

VINYL FLOOR

To care for the vinyl floor covering, use a damp mop with water and a mild cleaner. DO NOT SOAK FLOORING. Use care to avoid wetting carpet edges.

CARPETING

If your travel trailer contains carpeting, vacuum frequently. Professional steam cleaning for tough and deep stains is recommended. Use spot removers for minor spills. Always test carpet for color fastness in an inconspicuous area before using any product.

Note: Avoid chemical cleaners. Do not permit cleaners to touch carpet or fabrics.

COUNTERTOP

HIGH PRESSURE LAMINATE

Glass rings, food spills, water spots and smudges usually wipe off with a damp sponge. Stubborn stains can be removed with a general purpose spray cleaner. Some stains can be removed by squeezing fresh lemon juice over the stain and allowing the juice to soak for approximately forty-five minutes. After forty-five minutes, sprinkle baking soda over the lemon juice and rub with a soft cloth.

HARDWARE AND SINK OR SHOWER FIXTURES

Use mild dish soap and water to clean these fixtures. Never use harsh chemicals or sprays. A mild solution of vinegar and water works well to remove hard water spots and stains from the sink or shower fixtures.

Chapter 7

MAINTENANCE/STORAGE

Your new Jayco travel trailer is designed to be as maintenance free as possible. However, maintenance is important to retain its condition as near new as possible. Proper maintenance will give you many trouble-free miles.

NOTE: Some areas in this chapter may not be applicable to your travel trailer.

SLIDEOUT

Your Power Gear slideout system has been designed to require very little maintenance. To ensure a long life of your slideout system, read and follow these simple instructions.

C CAUTION: Do not work on your system unless the battery is disconnected.

- When the slideout is extended, visually inspect the inner slide rail assemblies (Fig. 3-6 in Chapter 3). Check for excess build-up of dirt or other foreign material; remove any debris that may be present.
- If the system squeaks or makes any noise, apply a coat of lightweight oil to the drive shaft and roller areas. (Fig. 3-6 in Chapter 3) Remove excess oil so dirt does not build-up.
- On travel trailers with a flush floor slideout, a light coat of silicone spray is recommended one time per year. To apply the spray, lift the carpet flap. Using a light coat of spray, make one pass all along the glide bar. It is recommended that this be done prior to each camping season.

C Caution: Use only a silicone spray to lubricate the glide bar. Other lubricants may attract dirt and oils which will stain the carpet.

- If you have any problems or questions consult your local Jayco dealer or call Power Gear 1-800-334-4712.

TV ANTENNA

Lubricating the Elevating Gear (Fig. 7-1)

Fig. 7-1

The elevating gear will need to be lubricated with a liberal amount of silicone spray. To lubricate, apply the silicone to the elevating gear with the lift in the down position then run the lift up and down a few times to distribute the lubricant over the gears.

Lubricating the Bearing Surface (Fig. 7-2)

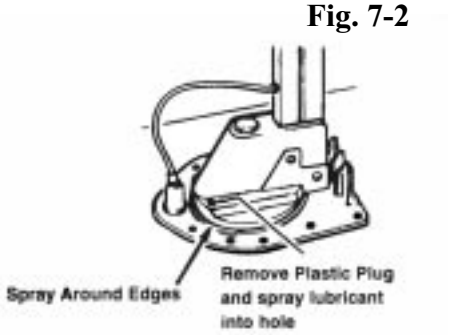


Fig. 7-2

Twice per year or when rotation of the antenna becomes difficult, lubricate the bearing surface between the rotating gear housing and the base plate with silicone spray. Elevate the antenna and remove the set screw or plastic plug from the rotating gear housing. Spray the silicone into the hole and around the edges of the gear housing. Rotate the gear housing until the lubricant coats the bearing surface and the antenna rotates freely.

Lubricating the Rubber Quad Ring (Fig. 7-3)

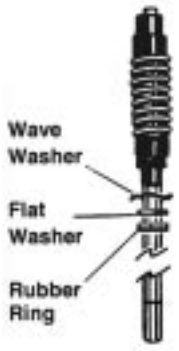


Fig. 7-3

Lubricate the rubber quad ring located on the elevating shaft below the worm gear with silicone spray at least twice per year to prevent the quad ring from becoming brittle resulting in leaks in the elevating shaft. Refer to the vendor's owner's manual for information regarding removal of the worm gear assembly.

TOILETS

Aqua Magic® 4

The Aqua Magic 4 does not require routine maintenance except for cleaning. In some installations the seat and cover can be removed to facilitate cleaning. To remove seat, both seat and cover should be in the open (up) position. Grasp assembly on both sides and pull away from you in an upward angle of approximately 45°. To reinstall seat and cover, place legs of assembly in rear slots of cover until they are centered on hinge posts and gently push down at approximately 45° until you feel the engagement.

STORAGE

Depending upon your area and where your unit is stored, your camper may be a target for damage from rodents and insects. To protect your camper, never leave food inside the unit and ensure that all surfaces are clean. You may want to place rodent control products in the unit during periods of storage. Mice can do a tremendous amount of damage to the tent, drapes, cushions, etc. particularly during the winter months. Storing units in fields make them particularly inviting to rodents. Periodically inspect your unit during storage and seal off any areas which can offer an entry point to rodents or insects. Please remember to remove any screens or tape you have used to seal openings before you use the camper again. Special interest publications, such as articles and books offered through TL Enterprises (Trailer Life, Motorhome, etc.) can offer additional and practical advice on the proper storage of your camper. Damage from rodents or insects are not covered under your Jayco Limited Warranty.

CAUTION: When storing your travel trailer, it is recommended that the battery be unhooked to avoid draining the battery.

LP GAS BOTTLES

1. The LP gas bottle or tank must be painted with a light color, such as white or silver plate, to reflect heat and light.
2. Rust, scratches, and/or dents can affect the safety of the bottle or tank. The D.O.T. requires that a visual inspection is made prior to each filling.
3. Any container that has been exposed to fire, leaks or seems damaged should not be refilled.
4. An LP bottle must always be placed in an upright position. Assure that the bottle is secured in place prior to moving the vehicle.
5. The D.O.T. requires that LP bottles be inspected, certified and labeled when it is twelve years old. (The number of years for certification may vary in your area.) Following the initial twelve-year period, the bottle must be certified every five years.
6. The valve of the bottle or tank must be CLOSED at all times except when it is connected to the recreation vehicle LP gas system or is being refilled.
7. Inspect the bottle at regular intervals. If there is a problem, have it evaluated by a qualified technician and discard it, if necessary. Verify with your local LP dealer that all required inspections and certifications have been completed on the LP bottle within the correct time period before refilling the bottle.

FURNACE

Preventive maintenance and safety checks should be performed by a qualified technician once a year, or more, depending on the use of the furnace. Failure to properly maintain the furnace may void the furnace warranty and can result in unsafe furnace operation. Preventive maintenance is NOT covered under the warranty. Power should be disconnected before servicing.

Note: To increase motor life, the furnace should be wired directly to the battery.

WARNING: If the user of this appliance fails to maintain it in the condition in which it was shipped from the factory or if the appliance is not used solely for its intended purpose or if appliance is not maintained in accordance with the instructions in this manual, then the risk of a fire and/or the production of carbon monoxide exists which can cause personal injury, property damage or loss of life.

CAUTION: Label all wires before disconnecting for servicing. Proper polarity must be observed so the furnace motor will run with the proper direction of rotation to insure correct air delivery.

CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous furnace operation.

You, as the owner/user, should insect the furnace monthly during the heating season for presence of soot on vent. Operating the furnace under this condition could lead to serious property damage, personal injury or loss of life. If soot is observed on the vent, immediately shut furnace down and contact a qualified service agency.

Listed below are several safety related items that you should follow during the heating season to assure continued safe operation of the furnace.

1. Inspect furnace venting. Venting must be free of obstructions, void of soot and properly terminated to the atmosphere. (Refer to installation manual.)

WARNING: Do not install screens over the vent for any reason. Screens will become restricted and cause unsafe furnace operation. Accessories are being marketed for RV products which the manufacturer does not recommend. For your safety, only factor authorized parts are to be used on your furnace.

2. Periodically inspect the vent for obstructions or presence of soot. Soot is formed whenever combustion is incomplete. This is your visual warning that the furnace is operating in an unsafe manner. If soot is present, immediately shut furnace down and contact your dealer or a qualified service person.
3. Periodically observe the main burner flame to assure it is burning with a hard blue flame with well defined burner ports. (Fig. 7-4) If flame appears yellow yellow or burner has a lazy flame, shut furnace down. It is possible that burner needs cleaning or replaced. If excessive rust and corrosion are present on burner surface, the burner must be thoroughly cleaned or replaced. The burner may be cleaned using a steel wire brush and blown clean using high compression air. Contact a qualified service person for assistance.

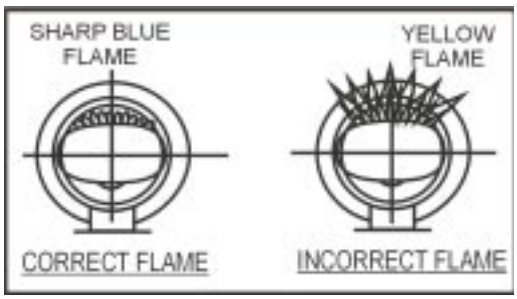


Fig. 7-4

NOTE: To properly observe burner operation, the furnace must be removed. This should only be done by your dealer or a qualified service agency.

4. Keep furnace clean. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.
5. The motor is permanently lubricated and requires no oiling.
6. Keep the furnace area clear of any combustible materials, gasoline or other flammable vapor and liquids.
7. Before operating furnace, check the location of the furnace vent to make sure it will not be blocked by the opening of any door on the trailer. If it can be blocked, do not operate the furnace with the door open.
8. Do not restrict the flow of combustion air or the warm air circulation to the furnace. To do so could cause personal injury and/or death.
9. Never operate the furnace if you smell gas. Do not assume that the smell of gas in your RV is normal. Any time you detect the odor of gas, it is to be considered life threatening and corrected immediately. Extinguish any open flames including cigarettes and evacuate all persons from the vehicle. Shut off gas supply at LP gas bottle.
10. Immediately shut furnace down and cc all a service agency if furnace cycles erratically or delays on ignition.

WARNING: Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

11. Never attempt to repair damaged parts. Always have them replaced by a qualified service agency.
12. Never attempt to repair the furnace yourself. Seek the help of a qualified service person.

13. Never restrict the ducting of the furnace. To do so could cause improper furnace operation.
14. Do not install air boosters in the ducting system. Such devices will cause the furnace to cycle on limit and to have erratic sail switch operation.
15. Clothing or other flammable material should not be placed on or near the appliance.
16. Always follow the Operating Instructions. Do not deviate from the step-by-step procedures.
17. Do not use this appliance if any part has been submerged under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been submerged under water.
18. When considering add-on rooms, porch or patio, attention must be given to the venting of your furnace. For your safety, do not terminate furnace vent inside add-on rooms, screen porch or onto patios. Doing so will result in products of combustion being vented into the room or occupied areas.
19. In any installation in which the vent of this appliance can be covered due to the construction of the RV or some special feature of the RV such as slide out always insure that the appliance cannot be operated by setting the thermostat to the positive "OFF" position and shutting off all electrical and gas supply to the appliance. Never operate furnace with vent covered.

Your furnace should be inspected by a qualified service agency yearly before turning the furnace on. Refer to the manufacturer's user's manual for a complete list of items to have serviced.

REFRIGERATOR

Refrigerator Care Checklist

Your refrigerator will give you years of trouble free service if you do these simple checks every three to six months:

- Keep the food compartment and the freezer clean. See "Defrosting" and "Cleaning".
- Defrost the refrigerator as necessary. See "Defrosting" and "Cleaning".
- Make sure the door seals correctly. See "Door Sealing".
- Be aware of any cooling changes that are not because of weather, loading, or gas control changes. If changes occur, contact your dealer or service center.
- Make sure the gas supply is propane gas only and not butane or a butane mixture.
- When in propane gas operation, examine the appearance of the flame. See "Gas Flame Appearance".
- Make sure the air flow in the lower intake vent, through the refrigerator coils and condenser, and out the upper exhaust vent is not blocked or decreased.
- Make sure the area behind the refrigerator is clear. Do not use the area behind the refrigerator for storage of any combustible materials, especially gasoline and other flammable vapors and liquids.

Defrosting

The cooling fins of the refrigerator operate at below freezing temperature and will naturally form frost from humidity, which is always present in the air. The humidity inside the refrigerator increases:

- With higher outside temperature and humidity.
- With the storage of non-sealed fresh foods or warm foods.
- With the amount of time that the door(s) are open.
- With any air leakage into the refrigerator.

Although the refrigerator is not frost free, it is made to limit frost on the cooling fins. At regular intervals, the temperature control system automatically melts most of the frost from the cooling fins. The water from the cooling fins drains into a collection cup that is attached to the back of the refrigerator. The heat of the cooling system evaporates the water from the collection cup.

It is normal for frost to collect inside the freezer. Excess frost decreases the cooling performance of the refrigerator. Defrost the refrigerator as necessary:

- Remove all food from the refrigerator.
- Push the selector switch to the OFF position to shut down the refrigerator.

NOTE: Defrosting the refrigerator makes excess water inside the refrigerator.

- Put dry towels (etc.) inside the refrigerator to absorb the water.
- Put trays of hot water in the freezer until the frost is melted.
- Empty the drip tray.
- Remove the wet towels (etc.) and dry the interior.
- Put the drip tray and all food in the refrigerator.
- Ignite or start up the refrigerator.

Cleaning

A good time to clean the refrigerator is just after you defrost it. Clean the inside of the refrigerator as often as necessary to avoid food odors:

- Remove all food from the refrigerator.

NOTE: Do not use abrasive cleaners, chemicals, or scouring pads because they can damage the interior of the refrigerator. “Dawn”, “Fantastic”, and “Formula 409” are the brand names of three products that are recommended to use.

- Wash the interior with a mild cleaner or a solution of liquid dish detergent and warm water.
- Rinse with a solution of baking soda and clean water.
- Dry with clean cloth.
- Put all food in the refrigerator.

Door Sealing

If either door does not seal correctly, excess frost will collect inside the refrigerator. Make sure the doors seal correctly:

- Close each door on a piece of paper that is about the size and thickness of a dollar bill.
- Gently pull the paper.
  - You should feel a slight drag between the gasket and the cabinet.
  - Do this on all four sides of the door.
  - If you do not feel a slight drag on the paper, the door does not seal correctly.
  - Have your dealer or an authorized Service Center correct the seal of the door.

Refrigerator Maintenance Checklist

Read and understand the following maintenance sections.

NOTE: Norcold is not responsible for installation, adjustment, alteration, service, or maintenance performed by anyone other than a qualified RV dealer or a Norcold authorized service center.

Have a qualified RV dealer or a Norcold authorized service center do these annual safety and maintenance checks:

- Examine the gas supply lines for leaks. Replace or repair if needed.
- Make sure the propane gas pressure is correct. Adjust if needed.
- Make sure the combustion seal is complete and intact. Replace or repair it if needed.
- Make sure the burner and the burner orifice are clean. Clean if needed.
- Make sure the electrode spark gap is correct. Adjust if needed.
- Make sure the AC and DC voltages are correct. Adjust if needed.
- Make sure the thermocouple tip is clean and secure.
- Make sure the are at the rear of the refrigerator is free of any combustible materials, gasoline, and other flammable vapors and liquids.

Refrigerator Storage

Before the refrigerator is stored for an extended (seasonal) period of time:

- Remove the black AC power cord from the receptacle and disconnect the DC power wires of the refrigerator.
- Defrost and clean the interior of the refrigerator.
- Close the doors with the storage latch.

If the refrigerator is stored for an extended period of time, before ignition or start up:

- Make sure there are no obstructions in the burner, the orifice, or the flue.

Refrigerator Maintenance

GAS FLAME APPEARANCE:

While in GAS operation, examine the appearance of the gas flame:

- Turn the temperature switch to the COLDEST position.
- Open the lower intake vent.

CAUTION: The burner box cover can be hot. Wear gloves to avoid burns.

- Open the burner box door and look at the gas flame.
  - The flame should be a darker blue inside and a lighter blue outside and should be a constant and steady shape.
  - If the flame is yellow or has an erratic and unstable shape, contact your dealer or Norcold authorized service center.
  - Make sure the flame does not touch the inside of the flue tube.
  - If the flame touches the inside of the flue tube, contact your dealer or Norcold authorized service center.
- Close the burner box door.

Refrigerator Fuse Replacement

The electrical circuits of this refrigerator have fuses to protect them from an overload. If a fuse is unserviceable, replace it as follows.

WARNING: Do not operate the refrigerator without the power board cover on the refrigerator. To prevent a circuit overload and a possible electrical fire, use only these fuses:

DC control circuit	**5 amp tan blade type automotive fuse**
AC circuit	**5 amp glass cartridge fuse**

1. Push the selector switch to the OFF position to shut down the refrigerator.
2. Remove the black AC power cord from the receptacle.
3. Remove the AC power cord from the power board that is at the rear of the refrigerator.
4. Remove the DC power supply wires from the power board.
5. Remove the ignition sense wire from the power board.
6. Remove the gas valve wires from the power board.
7. Remove the mounting screws and the power board cover.
8. Replace the unservicable fuse(s) with the new fuse(s) of the correct type and size.
9. Reverse this procedure and assemble the power board cover and all wiring.
10. If the fuse(s) continues to become unservicable, consult your dealer or a Norcold authorized service center.

RANGE AND OVEN

WARNING:

- **Make sure all controls are OFF and the range or cooktop is cool before cleaning.**
- **Make sure that all cooktop surfaces, burner grates and bruners are cool before cleaning or disassembling cooktop.**
- **Do not use oven cleaners, bleach, or rust removers on the cooktop or burner grates.**
- **Do not obstruct the flow of combustion and ventilation air.**
- **Keep appliance area clear of combustible materials, gasoline and other flammable vapors and liquids.**
- **Clean oven with oven cleaner only. Follow directions on the container.**
- **Never use a wire brush or metallic item for cleaning burner ports or orifices. Brush may "shed" bristles, that may lodge in the orifice or burner ports and cause a fire or explosion.**

C CAUTION:

- Clean all surfaces as soon as possible after boil overs or spillovers.
- Use warm soapy water only to clean the burner grates, cooktops, painted surfaces, porcelain surfaces, stainless steel surfaces and plastic items on your range or cooktop. DO not use grit or acid-type cleaners.
- Do not use steel wool, or abrasive cleaners, or acid type cleaners such as chlorine bleach on your cooktop or grate systems. They will damage your range or cooktop. Use only non-abrasive plastic scrubbing pads.
- Do not allow foods containing acids (such as lemon or tomato juice, or vinegar) to remain on porcelain or painted surfaces. Acids may remove the glossy finish. Wipe up egg spills when cooktop is cool.
- Do not wash warm porcelain surfaces. Allow these areas to cool before cleaning. You could burn yourself, or the porcelain could crack.
- Pitting and discoloration will result if spills are allowed to remain for any length of time on stainless steel.
- Do not allow spillovers to remain on the burner caps. The caps could become permanently stained.
- When cleaning around the burners, use care to prevent damage to the electrode (if so equipped). If a sponge or clothe should catch the metal igniter electrode, it could damage or break the electrode. If this occurs, the burner will not light.

The owner's cooking habits and cleanliness will affect the operation of the range or cooktop. Proper installation and care will help keep your range or cooktop looking and operating like new. Most cleaning can be performed using normal household items.

RANGE & SLIDE-IN COOKTOP

1. To remove the range top:
   a. Remove the hold down clip by sliding it forward from the front burner. (Fig. 7-5)
   b. Lift the top upward by the front edge. The top will "snap" loose from the clips mounted in the burner box.
2. To replace the range top:
   a. Lower the range top into place while centering the three holes in the top around the burners.
   b. The top must be centered around all three burners.
   c. Apply downward pressure on both sides to "snap" the top into place and secure the range top.
   d. Slide the hold down clip under front burner. (Fig. 7-5)
3. To remove burner grates:
   a. RV and CV Models - simply lift grate up and remove. Replace by placing two legs at a time into the retaining grommets.
   b. RA and CA model
   - Grasp one side of the grate (left or right-hand side) and pull straight up until grate "snaps" out of its retaining groove.
   - To replace, place one side of the grate in the burner well, ensure that the clip engages the emboss in the side.
   - Gently press other end of the grate downward to "snap" the grate into place. (Fig. 7-6)

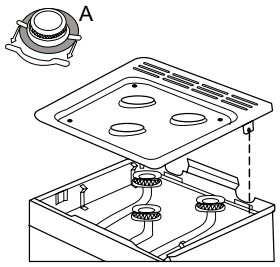
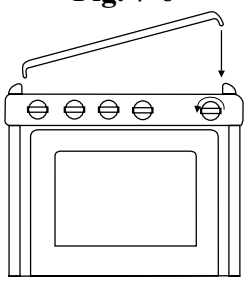


Fig. 7-5

Fig. 7-6



Clean all surfaces quickly after boil overs or spillovers. Use a dry towel or cloth to soak up spills.

ALL SURFACES - When surface is cool, clean with warm soapy water, rinse and dry with soft cloth. Additional cleaning measures:

- Control Knobs - pull the knobs straight off the stems and clean.
- Control Panel - You may use a spray glass cleaner, applying cleaner to a paper towel (do not spray directly on panel).
- Cook Top Surface - You may use a mile liquid cleaner /glass cleaner.
- Surface Burner Grates - They should be cleaned as soon as they become dirty. You may need to use a non-abrasive plastic scrubbing pad.
- Surface Burners, Burner Ports or Orifices - if clogged, gently brush perforated areas with a lightweight brush (toothbrush) or carefully clean holes out with a toothpick.

NOTE: Heavy burned on soil may require repeated cleaning steps until the soil is completely removed.

NOTE: The grate and surface of the cooktop is covered with porcelain coating. Porcelain is a glass/ceramic coating glazed to the surface of the metal. Porcelain is designed to provide a surface that can withstand high temperatures and maintain an attractive appearance and make it easier to clean.

Range and Oven Storage

Dry all surfaces and burner box, then spray surfaces with an oil base substance to preserve the surface from rusting during long term storage. Wipe off oil coating before reuse.

WATER HEATER

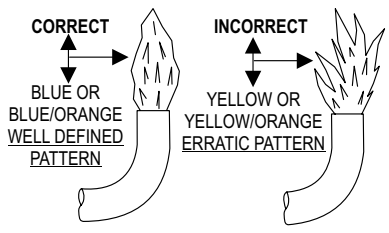
Maintenance of Water Heater

WARNING: If the user of the appliance fails to maintain it in the condition in which it was shipped from the factory or if the appliance is not used solely for its intended purpose or if appliance is not maintained in accordance with the instructions in the manual, then the risk of a fire and/or the production of carbon monoxide exists which can cause personal injury, property damage or loss of life.

WARNING: For your safety, all repairs should be performed by your dealer or a qualified service person.

1. Main Burner: Do not allow the burner to burn with a yellow flame, because sooting will occur. (See Safety Warnings) If the burner flame is yellow and has an erratic pattern, shut unit down and contact a qualified service agency. Do not continue operating unit with improper burner flame. (See Fig. 7-7)

Fig. 7-7



2. Periodically inspect unit for soot. If soot is present anywhere on water heater, immediately shut unit down and contact your dealer or a qualified service person. Soot is a sign of incomplete combustion and must be corrected before operatin water heater. Areas to check would include:
   a. Check for an obstruction in burner or flue box.
   b. Check the screen in the door to see that no foreign material has accumulated to prevent flow of combustion and ventilating air.
   c. Check to be sure there is no flame present at burner orifice or burner whenever main gas valve is closed. This can be checked by turning the OFF/ON switch to the "OFF" position.
3. Frequent checks should be made of the grommet on the gas inlet to assure tight seal.
4. Periodically check wiring and wire connection to be sure wiring is not damaged/frayed and that all terminals and connections are tight and in compliance with codes.

Draining and Storage of Water Heater

If RV is to be stored during winter months, the water heater must be drained to prevent damage from freezing.

1. Turn off electrical power to water heater either at the switch from the electrical element or at breaker.
2. Shut off gas supply to water heater.
3. Turn off pressure pump on water system.
4. Open both hot and cold water faucets.
5. Remove anode rod from tank.
6. Follow instructions for draining entire water system in Chapter 4.

NOTE: Be certain to refill water heater with water and remove all air from tank and lines before relighting or before turning on electrical power.

Winterizing Water Heater

If your water heater plumbing system is equipped with a bypass kit, use it to close off the water heater, drain the water heater completely and leave the water heater closed off (out of the system) in the bypass position particularly if you are introducing antifreeze into the plumbing system. Antifreeze can be very corrosive to the anode rod creating premature failure and heavy sediment in the tank. If the plumbing system is not equipped with a bypass kit, and you intend to winterize by adding antifreeze to the system, remove the anode rod (storing it for winter) and replace it with a 3/4"drain plug.

WARNING: Drain the water heater if it is subject to freezing temperatures.

AIR CONDITIONER

For proper operation of the air conditioner unit, it is important to clean and, if necessary, replace the filters. The filters are made from long life non-allergenic natural fibers which can be cleaned and reused, and which completely filter the circulated air when the air conditioner is in operation. If the filters are not cleaned at regular intervals, they may become partially clogged with lint, dirt, grease, etc. A clogged filter will produce a loss of air volume and may eventually cause an icing-up of the cooling (evaporator) coil. It is recommended that the filters be cleaned and changed at least every two weeks when the air conditioner is in operation.

C CAUTION: Do not operate your air conditioner for extended periods of time without the filter installed. When the filter is not installed, the lint, dirt, grease, etc. That are normally stopped by the filter are now accumulating in the cooling coil. This not only leads to a loss of air volume and a possible icing-up of the cooling coil, but could also result in serious damage to the operating components of the air conditioner. It is recommended that the filters be cleaned and changed at least every two weeks when the air conditioner is in operation.

CLEANING AND/OR CHANGING THE FILTERS:

1. Remove the selector switch and thermostat knobs from the ceiling assembly.
2. Remove the screws (Fig. 7-8) that secure the ceiling assembly shroud to the ceiling assembly.
3. Lower the shroud and gently slide it off the control knob shafts.
4. Take filters out and either clean or exchange with other filters.
5. If the vehicle is equipped with a flush mount ceiling assembly, remove the four return air grill screws. Remove filter from grill and either clean or exchange with new filter.

Fig. 7-8

NOTE: If replacement filters are necessary, the filters can be purchased from most RV Products Authorized Service Centers. It is recommended that spare filters be carried with the RV at all times to replace worn, torn or deteriorated filters.

LP GAS ALARM

To keep your alarm in good working order, you must:

- Test the alarm weekly. (See Chapter 4 for “Testing Procedures”)
- Check the indicator light on the front of the unit regularly. Make sure it is green in color .
- Vacuum the dust off of the alarm cover weekly, more frequently in dusty locations, using the soft brush attachment of your vacuum.
- Clean the alarm cover weekly. Hand wash using a damp cloth, or paper towel. Dry with a soft cloth.
- DO NOT SPRAY CLEANING AGENTS OR WAXES directly onto the front panel. This action may damage the sensor, cause an alarm or cause an alarm malfunction.

FAUCETS

Many of the bathroom cleaners in use today contain aggressive chemicals and abrasives for the purpose of removing soap scum and stains from porcelain, enamel, and ceramic tile surfaces. Often these cleaners are also used to clean the chrome, polished brass, or other finishes on faucets, showerheads and other bathroom accessories. Depending on the particular abrasive or chemical, application to these products may result in either immediate or long-term damage or even removal of the finish. Please be aware that unintentional splashing or overspray of cleaners can be as harmful as deliberate application. **The manufacturer recommends cleaning by wiping with a soft, damp cloth or towel.**

SMOKE ALARM

1. Test weekly by pushing "test" button. The alarm will sound also test by blowing smoke into alarm. The alarm will stop after the smoke has cleared out of the alarm (approximately one minute).
2. Model 4662 has a silence feature. This is incorporated in the test button. When this feature is present, this button is colored yellow. If an alarm is caused by smoke from cooking, or other non-hazardous sources, it can be silenced for approximately ten minutes by depressing the test button once. If, during this time the smoke density increases, the unit will again go into alarm. After the ten minute period, the detector will resume its normal sensitivity.
3. Clean or vacuum dust from the unit at least once a year. The unit may alarm during cleaning.

WARNING: DO NOT PAINT. Painting this alarm could result in decreasing its sensitivity to smoke.

WARNING: FOR RECREATION VEHICLES Test Smoke Alarm operation after vehicle has been in storage, before each trip, and at least once per week during use.

Battery Replacement - Smoke Alarm

Battery powered units will not operate and can not be mounted, when the battery compartment is empty. Ensure that FRESH 9-volt batter is installed.

Always install a Gold Peak 1604P or any Alkaline battery. Always test after a new battery is installed.

WARNING: USE ONLY BATTERIES SPECIFIED. Use of different batteries may have a detrimental effect on alarm operation.

Under normal use, replace battery once a year. When battery starts to weaken, the alarm will beep at least once a minute for 7 days minimum. Replace battery immediately should this low battery signal occur. If the low battery signal is ignored or if the replacement battery is severely depleted, the alarm may sound continuously as if it were in alarm. This is a warning that a proper fresh battery must be installed immediately.

Constant exposure to high or low temperatures or high humidity may reduce battery life.

ENTRANCE STEP

Covering Nicks and Scratches

- Seal any nicks or scratches with an automotive grade primer to prevent rust.
- Once the nick or scratch has been sealed, cover the damaged area with an automotive grade high-gloss paint.

Lubricating the Mechanism

NOTE: It is recommended that you lubricate the mechanism every 30-60 days.

- Carefully clean the area around the pivot points (Fig. 7-6) (the rivets involved in the motion of the mechanism).
- After cleaning, lubricate the pivot points between the parts (to pinpoint the area, locate the washer between the parts). An automotive grade, non-staining lubricant is recommended.

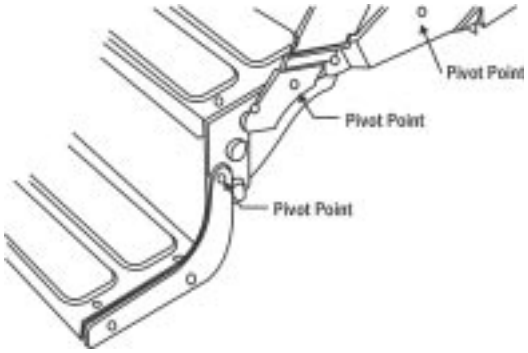


Fig. 7-6

CAUTION: To prevent the possibility of a person slipping on the RV step, avoid letting any excess lubricant come in contact with the surface of the RV step itself. Carefully clean the entire RV step after lubricating the mechanism.

MECHANICAL MAINTENANCE CHART

COMPONENT	MAINTENANCE	AVOID
Wheel Bearings	The wheel bearings in your new Jayco travel trailer are pre-greased. It is recommended that you repack these bearings at 12,000 miles (19,000 kilometers) or at the end of each season's camping to prepare for the winter months ahead. Use only a multipurpose No. 1 or 2 good quality wheel bearing grease. If the bearing or cone (race) become pitted, replace any damaged part. Note: If you are concerned about heat in the wheel bearings, check them occasionally while traveling by placing your hand on the hub. You will be able to hold your hand momentarily on the hub. Should it be extremely hot, it is recommended to have the bearings inspected by a qualified service center. Note: During the break-in period (first 500 miles) (800 kilometers) your hubs may feel extra warm due to brake shoes setting in with the brake drum.	Exposure to any water or condensation will cause the bearings to rust and be damaged. Never let the bearings run dry. Never overpack the wheel bearding, especially in the middle of the hub. It will trap heat and possibly disperse grease from the seals or dust cap.
Lug Nuts	Lug nuts must be checked at 25 miles (40 kilometers) when your travel trailer is new or a tire is removed and every 3,000 miles (5000 kilometers) thereafter. In addition, the lug nuts should be checked periodically for safety, especially before long trips, extensive braking, or tire changes. Tighten the lug nuts to 90-120 ft. pounds torque using a cross tighten sequence: 5 stud = 1-3-5-2-4 6 stud = 1-4-2-5-3-6	DO NOT ignore checking wheel lug nuts.

COMPONENT	MAINTENANCE	AVOID
Tires	It is very important to check tires often as noted in Chapter 3.	DO NOT ignore checking tire pressures often.
Change Tire & Wheel	To raise coach, place jack (hydraulic or screw) underneath main frame rail, which spans from front to rear, just inside of tires. Use jack stands or solid-blocking for safe support. Place jack just ahead of front tire or just behind rear tire. You may wish to loosen (only) lug nuts before raising coach. Remove lug nuts after tire clears ground.	Never raise the travel trailer by placing the jack under the axle beam, springs or any attachment parts.
Brakes	It is important to have brakes adjusted between 200-1,000 miles (320-1600 kilometers) after initial break-in period by a qualified technician. This operation may or may not be included as part of selling price. After the initial break-in period, you should adjust the brakes after each 3,000 miles (4,800 kilometers) or at the beginning of each season's camping trips.	It is very important to keep brakes adjusted. Poorly adjusted brakes will not function correctly. Under adjustment can cause an adjuster wheel to fall out.
Coupler	Use a small quantity of lubricant on the moving mechanism and all points of movement in the actuator to insure ease of operation. Use conventional grease on the hitch ball for ease of operation.	
Tongue Jack	Lubricate the jack by extending to full down position and insert SAE 30 oil through oil hole in top of jack. Do this several times per season.	
Appliances	To care for brushed chrome it is recommended to clean with a mild soap and water. Wipe dry with a soft cloth. Apply a light coat of oil such as baby oil periodically. Various items on these appliances need to be cleaned periodically as need be, such as burner orifices, etc. See individual booklets for directions or see your dealer.	DO NOT use steel wool, ammonia, acids, or abrasives on chrome surfaces.

COMPONENT	MAINTENANCE	AVOID
Fifth Wheel Hitch	• Inspect all joints and links for tightness to prevent loss. Design is such that bolts and nuts can be tight and still function properly. • Lubricate all moving parts of fifth wheel for proper operation. • Grease top surface of wheel to eliminate wear and facilitate easier turning. • Before coupling to trailer, inspect all moving parts of fifth wheel. Replace all bent or worn parts. • Thoroughly inspect unit every 1,000 miles (1600 kilometers). • Ensure that all installation bolts and nuts are tight.	
Fifth Wheel Landing Gear	Inspect pad and inner ram periodically. Apply silicone spray to the inner tube, pad and inside of handle alignment tube yearly. Grease gears in the gear box and at the top of each leg with extreme pressure grease yearly. Oil the shaft bushings with SAE 30 oil yearly. Clean electrical connections with baking soda, then cover with a thin coat of grease twice a year.	Excessive quantity of grease. Excessive oil will run and attract dirt.
LP Gas System	Beginning of each camping trip: 1. Inspect all gas lines for crimps and road damage. 2. Check all lines and connections for leakage with soapy water or leak detector. 3. Have the regulator checked and adjusted to the proper pressure once per year by a qualified dealer.	DO NOT smoke while changing bottles or any lines. DO NOT allow connections to be loose.

COMPONENT	MAINTENANCE	AVOID
Sealants	All sealants used in construction can deteriorate from U.V. exposure, air polution, freezing temperatures and other exposure to weather elements. Tape sealants used around doors, windows, and extrusions are subject to dry out conditions by sunlight and will allow water seepage when they deteriorate. Inspect sealants at least two times each year and look for voids and/or dried out, cracking or peeling conditions. See Fig. 7-7 or 7-8. Inspect all locations as indicated in Figures 7-9 or 7-10. Reseal as necessary or at least one time each year. Contact your dealer for the appropriate sealant to use.	Using poor quality sealing material. Failure to reseal sealant and putty tape.
Entrance Door	Inspect and seal the inside bottom corners of the door frame threshold one time each year.	
Roofs	All roofs require maintenance. At least two times each year, inspect all seams: front, rear, around all vents, and along all moldings for voids, lifting, peeling or cracking. Reseal as necessary or at least One time each year. If you notice any deterioration in the seal, scrape off any cracked or loose sealant and then reseal the area. See Fig. 7-9 or 7-10.	Not resealing once per year.

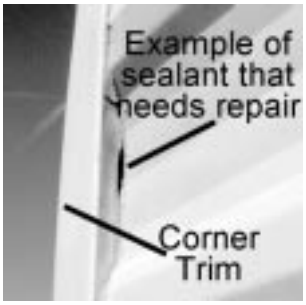


Fig. 7-7

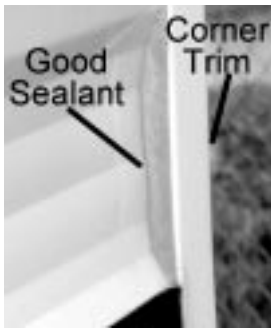
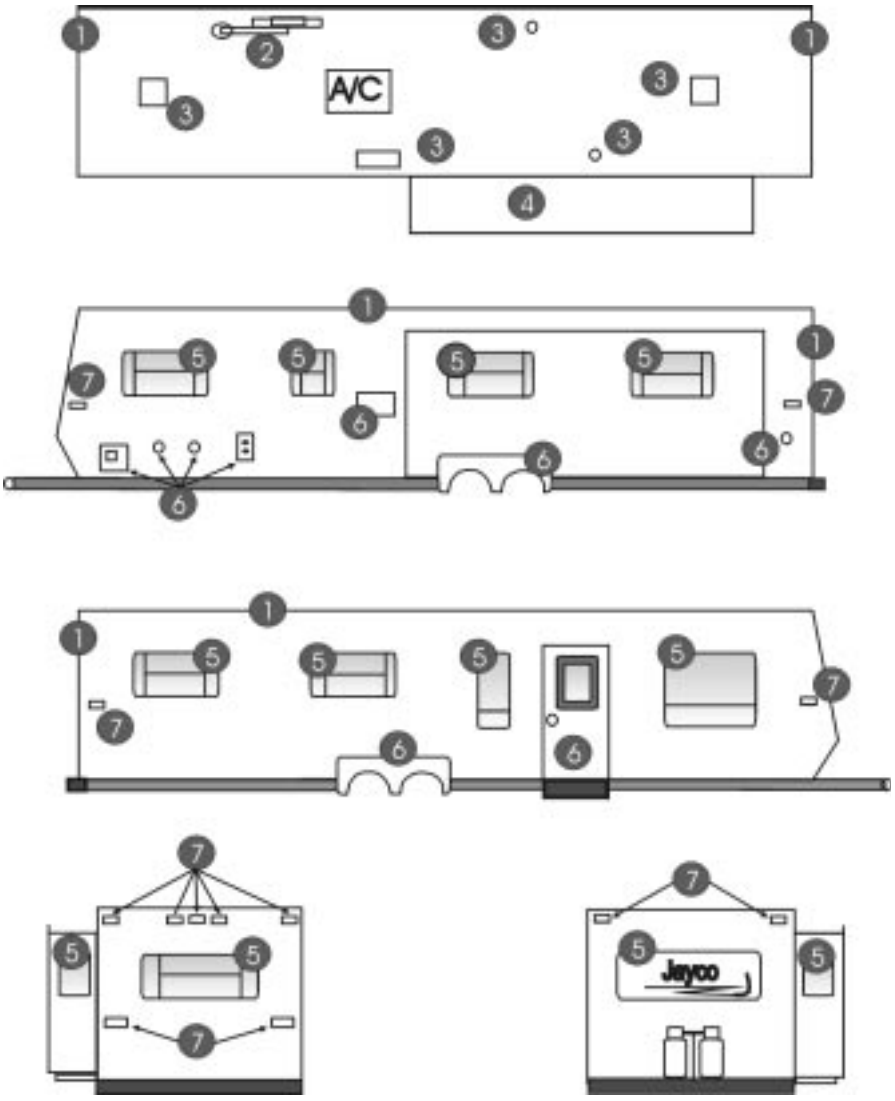


Fig. 7-8

INSPECTION POINTS FOR SEALING

Figure 7-9

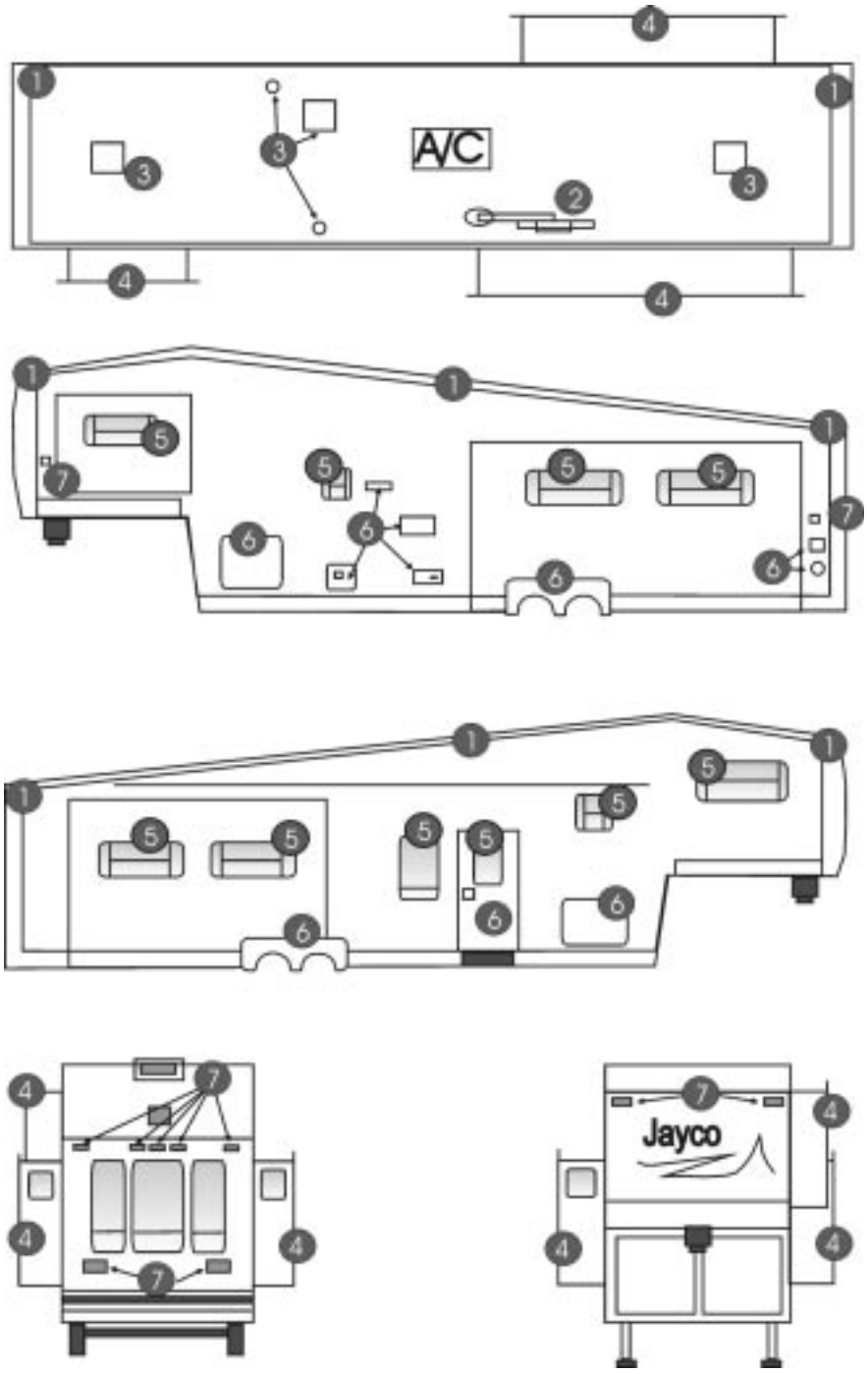
Conventional Travel Trailer



1. Moldings
2. TV Antenna
3. Vents
4. Slideout Trim/Moldings
5. Windows
6. Exterior Attachments
7. Marker & Tail Lights

Figure 7-10

Fifth-Wheel Travel Trailer



1. Moldings
2. TV Antenna
3. Vents
4. Slideout Trim/Moldings
5. Windows
6. Exterior Attachments
7. Marker & Tail Lights

MAINTENANCE CHECKLIST

PRIOR TO FIRST TRIP
- □ Check LP gas lines for leaks. Refer to Chapter 4.
- □ Test LP gas detector. Refer to Chapter 4.
- □ Sanitize fresh water system. Refer to Chapter 4.
- □ Tighten wheel nuts to specified torque values.
- □ Open all windows and the door and start the furnace. Leave the windows and door open and the furnace on until the odor from the initial use of the furnace is fully dissipated.

FIRST TWO-HUNDRED MILES
- □ Tighten wheel nuts to specified torque values.
- □ Have brakes adjusted by a qualified service technician.

EACH TRIP
- □ Test LP gas detector. Refer to Chapter 4.
- □ Check battery water level. (If equipped with battery.)
- □ Check tire pressure and wear. Make sure the tires are cold when checking the tire pressure.
- □ Check running lights.
- □ Inspect safety chains for signs of wear.
- □ Test brakes.
- □ Flush out water heater tank.

AFTER EVERY TIRE CHANGE
- □ Tighten wheel nuts to specified torque values at twenty-five miles to assure that they are correctly "seated" after the tire change.

DAILY
- □ Recharge battery after each use.
- □ Ensure LP gas detector operation light is green in color.

WEEKLY
- □ Test LP gas detector.
- □ Check tire pressure and wear. Make sure tires are cold when checking the tire pressure.

MONTHLY
- □ Clean and lubricate the coupler.
- □ Check fire extinguisher pressure. Refer to the fire extinguisher label for specific instructions.
- □ Test the ground fault circuit interrupter (GFCI)

EVERY THREE MONTHS OR 3,000 MILES
- □ Compare water heater pilot flame with ideal flame. Refer to the water heater owner's manual for ideal flame. Have cleaned and adjusted as necessary by a qualified technician.
- □ Compare refrigerator pilot flame with ideal flame. Refer to the refrigerator owner's manual for ideal flame. Have cleaned and adjusted as necessary by a qualified technician. (RV type refrigerator only)
- □ Inspect refrigerator door seals.
- □ Inspect refrigerator combustion seals. Have cleaned and adjusted as necessary by a qualified technician. (RV type refrigerator only)
- □ Check LP gas lines for leaks. Refer to Chapter 4.
- □ Inspect LP cylinders for rust, pits, gouges, scrapes or sharp dents. Repaint cylinders if rust is present.
- □ Drain and sanitize fresh water system. Refer to Chapter 4.

- Check, clean, tighten and lubricate battery cables.
- Tighten wheel nuts to specified torque values.
- Examine the tires for unusual wear, sidewall defects from possible cuts, bulging and abrasions.
- Lubricate tongue jack.
- Lubricate hitch ball.
- Have brakes adjusted by a qualified service technician.

EVERY SIX MONTHS OR 6,000 MILES

- Clean drains with approved drain cleaners.
- Check pipe connections for tightness. Tighten if necessary.
- Lubricate all moving parts on the entrance steps.
- Lubricate entrance and baggage door locks.
- Clean and lubricate stabilizer jacks.
- Inspect wheels for cracks, dents or distortion.
- Inspect and reseal, as necessary, all sealant and putty tape. Refer to information earlier in this chapter.
- Have suspension system serviced by a qualified service technician.
- Lubricate the elevating gear on the television antenna.
- Lubricate the bearing surface between the rotating gear housing and the base plate on the television antenna.
- Lubricate the rubber quad ring on the elevating shaft located on the television antenna.
- Clean fifth-wheel landing gear electrical connections with baking soda, then cover with a thin coat of grease.

EVERY YEAR OR 12,000 MILES

- Lubricate moving parts on the awning hardware. (Awning option only.)
- Manually operate the pressure-temperature control lever on the water heater.
- Clean city water entry strainer.
- Check demand tank vent for obstructions.
- Check water pump connections and mountings for tightness.
- Have LP gas system inspected and serviced by a qualified technician.
- Inspect and seal corners at the threshold of the entrance door.
- Have the refrigerator inspected and serviced by a qualified technician.
- Have brakes inspected and serviced by a qualified technician.
- Repack wheel bearings.
- Have furnace inspected and serviced by a qualified technician.
- Apply silicone spray to the fifth-wheel landing gear inner tube and pad and the inside of the handle alignment tube.
- Grease gears in the gear box and at the top of each leg of the fifth-wheel landing gear with extreme pressure grease.
- Oil the shaft bushings of the fifth-wheel landing gear with SAE 30 oil.
- Inspect and reseal, as necessary, all sealant and putty tape. Refer to information earlier in this chapter.

PRIOR TO STORAGE

NOTE: If storing for the winter, be sure all winterizing steps are followed. Refer to winterizing section.

- Drain and flush all holding tanks; fresh water, gray water, black water and hot water tanks.
- Drain all water lines.
- Close the LP gas tank valve(s). If your tanks do not already have a cover, consider purchasing at least a vinyl LP tank cover. Make sure the regulator is covered.
- Disconnect 120-volt electric power to the RV.
- Remove all batteries from the RV and store in a place where they won't freeze. Batteries that have been frozen will never hold a proper charge.
- Check your roof and other surfaces to ensure there is no damage and potential for leakage that might otherwise go unnoticed until it is too late.
- Inspect and reseal, as necessary, all sealant and putty tape. Refer to information earlier in this chapter.
- Turn off 12-volt/120-volt/LP gas to the refrigerator; defrost and clean. Use crumpled newspaper or open boxes of baking soda in the refrigerator to eliminate odors during storage.
- Remove all perishable items from the interior. Include in this any items that are susceptible to freezing, if storing during the winter months.
- Cover all external outlets, such as furnace, exhaust, etc. to prevent "critters" from entering.
- Thoroughly wash the interior and the exterior of your RV.
- Close all windows and roof vents.
- Cover tires that are exposed to sunlight to prevent weather checking and other UV damage.
- Cover the roof air conditioner.
- Consider the purchase of a tarp to cover your RV during storage. Make sure you invest in a good tarp that can "breathe.
- Turn all cushions on edge to prevent the entrapment of moisture/mildew during long term storage.

DURING STORAGE PERIOD

- Remove snow loads from the top of your RV to prevent causing damage to the unit’s structure.

TOWABLE TRANSFERRABLE LIMITED WARRANTY

TOWABLE TRANSFERABLE LIMITED WARRANTY

Folding Camping Trailer,Conventional Travel Trailer, Fifth-Wheel Travel Trailer
Two year limited warranty
Three year structural

SUMMARY OF WARRANTY:

Jayco warrants every Jayco towable recreation vehicle to the first retail consumer and transferee, for a period of two (2) years and three (3) years on the structure from the date of purchase under normal use and service, when used for its intended purpose of recreational travel and camping that all parts of our manufacture are free from substantial defects in material and workmanship. The warranty period shall begin on the date the vehicle is sold to the first retail consumer purchaser or, if the dealer prior to sale first places the vehicle in service, on the date the vehicle is first placed in such service.

This warranty may be transferred once only during the warranty period, with a proper application and a $100 processing fee. Contact your dealer or Jayco for details.

STRUCTURAL WARRANTY:

Jayco warrants the structure of the interior and exterior sidewalls, floor, roof, and frame to be free of material and manufacturing defects.

EXCLUSIONS:

(1) This warranty does not apply to any vehicle manufactured more than two (2) years prior to the first retail sale, unless Jayco has issued an eligibility certificate for this specific vehicle VIN #. This may require re-inspection by a Jayco representative.

(2) Items added or changed after the vehicle left the possession of Jayco.

(3) Any vehicle used for commercial purposes, or full time residential use.

(4) Normal wear and usage, such as fading or discoloration of soft goods (tents, upholstery, drapes, carpet, vinyl, screens, cushions, mattresses), fading or discoloration of exterior plastic or fiberglass components, tears, punctures, soiling, mildew, effects of moisture condensation inside the vehicle, or mishandling, neglect, abuse, misuse, lightning or other acts of nature, or corrosive atmospheres which can result in rusting , oxidation or pitting.

(5) Minor imperfections, which do not affect the suitability of the vehicle for its intended use.

(6) Normal and routine maintenance such as inspections, lubricating, adjustments, tightening of screws, tightening of lug nuts and wheels, sealing, rotating, cleaning, or damages arising from the failure to have maintenance performed as outlined in the owners manual.

(7) Alignment or adjustments to axles or spindles when caused by improper maintenance, loading or damage from road hazards, including off road travel, wheel damage or balancing, or damage resulting from tire failures.

(8) Costs incurred for transportation of the vehicle to a dealer, or costs incurred as the result of the consumer's request to have repairs performed at a location other than an authorized dealership.

(9) This Limited Warranty does not apply to or cover any component, which is warranted separately by its manufacturer. Examples are:

Chassis...Tires...Axles...Wheels... Running Gear Components...
Batteries...Appliances...Power Converters...Jacks...

The written warranty that is provided by the component manufacturer is a direct responsibility of that manufacturer. Jayco makes no warranty as to those components. Please refer to the written warranties issued by such component manufacturers for the terms and provisions of their written warranty undertakings. Warranty information with respect to these items is available from your dealer.

Revised 6/00 Litho U.S.A.

HOW TO OBTAIN WARRANTY SERVICE:

In the event that a defect in materials or workmanship is found to exist in body parts constructed by Jayco, Jayco will bear the cost of the repair or replacement of such defective materials or workmanship;Provided that the owner:

(A) Notifies an authorized Jayco dealer or Jayco of the defect within 10 days; (If authorized service is not available in your area or other assistance is needed to obtain the benefit of this warranty, please call direct to Jayco 219-825-0608 and ask to speak with someone in the warranty department.)

(B) Returns the vehicle to a dealer or factory service center promptly, as scheduled; and

(C) Pays any freight or transportation costs, or import duties or fees involved.

No action as to enforce this warranty shall be commenced later than three (3) months after expiration of the warranty period.

NOTE: Jayco, in obtaining repairs, does not control the scheduling of service work at dealerships. You may encounter some delay in scheduling or completion of work.

PURCHASER'S OBLIGATIONS:

Purchaser shall deliver this vehicle for warranty service within a reasonable time after discovery of the defect and in no event later than thirty (30) days after expiration of the warranty period. All incidental and consequential expenses incurred by Purchaser in obtaining warranty service shall be borne by Purchaser. No action to enforce this warranty shall be commenced later than three (3) months after expiration of the warranty period.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES:

You and any other user of Jayco products shall not be entitled to any consequential or incidental damages, including without limitation, loss of use of the unit, inconvenience, lodging, damage to personal property, phone calls, meals, lost income or earnings. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

DISCLAIMER AND LIMITATIONS OF IMPLIED WARRANTIES:

Jayco does not authorize any person to create for it any other obligation or liability in connection with this vehicle. Any implied warranty of merchantability or fitness for a particular purpose applicable to this vehicle is limited in duration to the duration of this written warranty. The performance of repairs is the exclusive remedy under this written warranty or any implied warranty. Jayco shall not be liable for incidental or consequential damages resulting from breach of this written warranty or any implied warranty. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

PARTS AND DESIGN CHANGES:

Jayco may make parts and design changes from time to time without notice and repairs or replacements may be made with new or different parts. Jayco reserves the right to make changes in the design or material or its products without incurring any obligation to incorporate such changes in any product previously manufactured.

WARRANTY REGISTRATION:

Your warranty registration records should be completed and delivered to the manufacturers of component parts. Your Jayco Dealer will assist you in filling out the warranty registration form, which must be returned to Jayco within 10 days of you taking delivery of your Jayco product. Failure to send this warranty registration to Jayco can cause you delays in obtaining the benefits of your Jayco Limited Warranty.

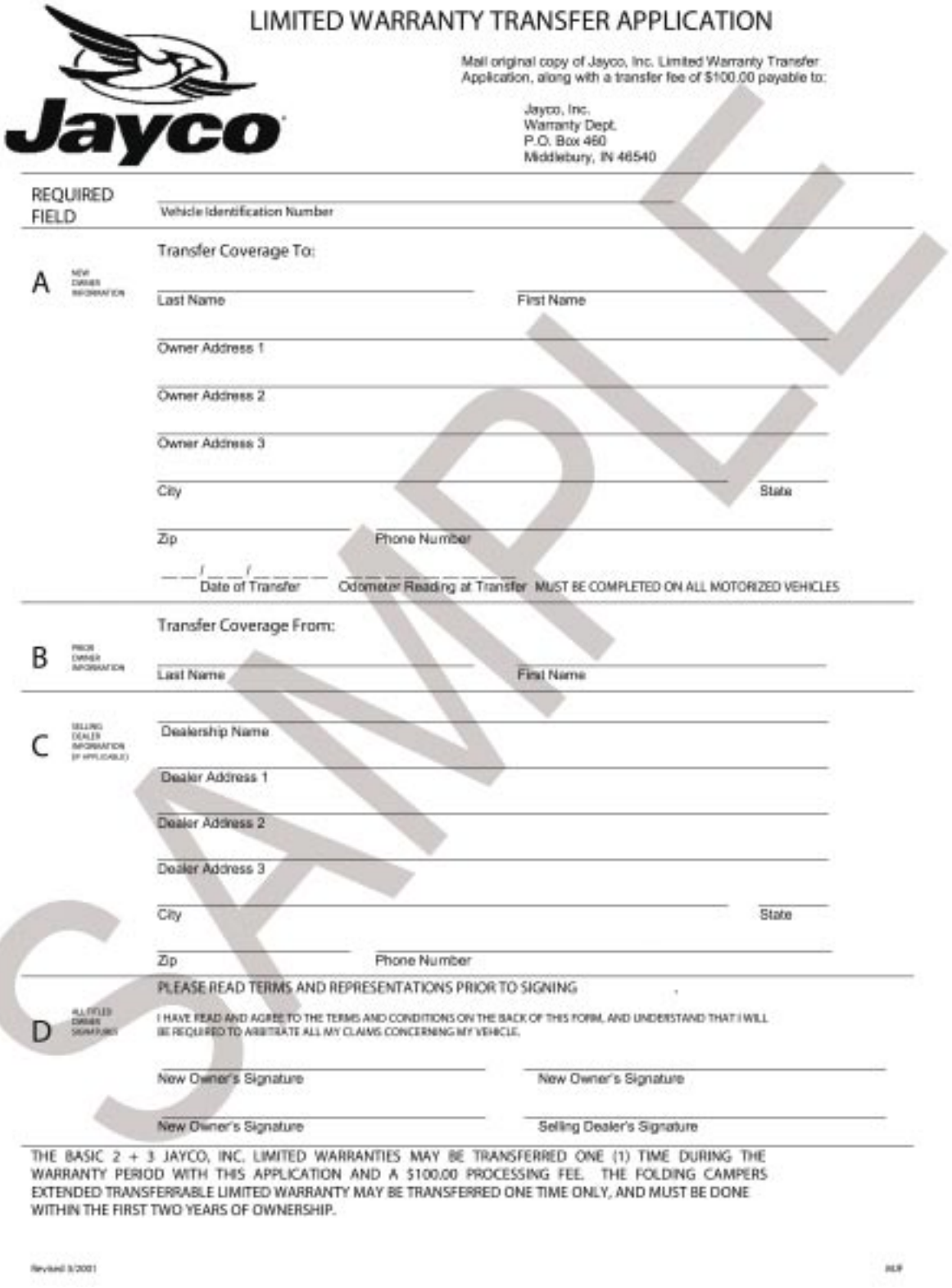
All inquiries regarding this Warranty should be sent to:

JAYCO, INC.
903 South Main * P.O. Box 460 * Middlebury, IN 46540
Telephone: 219-825-0608

Litho U.S.A. Revised 6/00

LIMITED WARRANTY TRANSFER APPLICATION

The warranty on your unit is transferrable one time only, form the original owner to a subsequent owner. This form as shown here and one the next page must be completed by the dealership. The form should be sent with the $100.00 to Jayco, Attention: After Market Services.



LIMITED WARRANTY TRANSFER APPLICATION

Mail original copy of Jayco, Inc. Limited Warranty Transfer Application, along with a transfer fee of $100.00 payable to:

Jayco, Inc.
Warranty Dept.
P.O. Box 460
Middlebury, IN 46540

REQUIRED FIELD

Vehicle Identification Number

A NEW OWNER INFORMATION

Transfer Coverage To:

Last Name

First Name

Owner Address 1

Owner Address 2

Owner Address 3

City

State

Zip

Phone Number

__ __ / __ __ / __ __ __ __ Date of Transfer

Odometer Reading at Transfer MUST BE COMPLETED ON ALL MOTORIZED VEHICLES

B PRIOR OWNER INFORMATION

Transfer Coverage From:

Last Name

First Name

C SELLING DEALER INFORMATION (IF APPLICABLE)

Dealership Name

Dealer Address 1

Dealer Address 2

Dealer Address 3

City

State

Zip

Phone Number

D ALL TITLED OWNER SIGNATURES

PLEASE READ TERMS AND REPRESENTATIONS PRIOR TO SIGNING

I HAVE READ AND AGREE TO THE TERMS AND CONDITIONS ON THE BACK OF THIS FORM, AND UNDERSTAND THAT I WILL BE REQUIRED TO ARBITRATE ALL MY CLAIMS CONCERNING MY VEHICLE.

New Owner's Signature

New Owner's Signature

New Owner's Signature

Selling Dealer's Signature

THE BASIC 2 + 3 JAYCO, INC. LIMITED WARRANTIES MAY BE TRANSFERRED ONE (1) TIME DURING THE WARRANTY PERIOD WITH THIS APPLICATION AND A $100.00 PROCESSING FEE. THE FOLDING CAMPERS EXTENDED TRANSFERRABLE LIMITED WARRANTY MAY BE TRANSFERRED ONE TIME ONLY, AND MUST BE DONE WITHIN THE FIRST TWO YEARS OF OWNERSHIP.

Revised 3/2001

SAMPLE

TERMS AND REPRESENTATIONS

By my signature(s) on the face side of this form, and in order to induce Jayco, Inc. to transfer its Limited Warranty, I represent the following:

1. That I have received and read a copy of the Jayco Limited Warranty and Owner's Manual.
2. I understand that the unit is to be used only for recreational camping and travel.
3. That all information provided by me on the face side of this form is true and correct.
4. I understand that I am purchasing a pre-owned recreational vehicle and Jayco, Inc. does not make any representation as to its present condition.
5. I understand and agree that all my claims against Jayco must be arbitrated and that a court will enforce the arbitration award. The terms of arbitration are set forth below:

INFORMAL DISPUTE RESOLUTION AGREEMENT

I am entitled to receive a copy of this Agreement, and I may review it with my attorney before signing. I and anyone making claims on my behalf, or through me, shall submit any and all claims I may have in connection with my recreational vehicle (RV) against any retail dealer, manufacturer, or supplier of component parts, to binding arbitration under the federal Arbitration Act, 9 U.S.C. § 1-14, to the extent permissible under federal law. I agree that if I have a claim relating to my RV, I will allow the dealer and Jayco to inspect it and make necessary repairs. If my claim is not then satisfied, I will notify Jayco and binding arbitration proceedings will be held after I have paid an initial fee of $125 to the American Arbitration Association and I cannot pursue my claim in court or in any administrative proceeding. Arbitration will be administrated by the America Arbitration Association (AAA), pursuant to its Commercial Arbitration Rules, unless and until Jayco designates a different administrator, in which event a notice will be mailed to your last known address. If my claim is less than $10,000, Jayco will pay the initiation fee and arbitrator's fees in excess of $125, and the arbitrator shall not award damages in excess of $10,000. If my claim exceeds that amount or is not specified, I will pay one-half of the fees and costs in excess of $125. I, the dealer, and Jayco will each pay their own costs and expenses in connection with the arbitration hearing. The claim will be heard by a single arbitrator, and will be held thirty (30) days after the claim is filed, unless all parties agree to a later date. The arbitrator shall be selected from a panel named by the AAA, pursuant to its rules. The arbitrator shall be permitted only to award actual damages for financial loss, and shall not award damages for personal injury (or mental anguish, or other intangible claims), or punitive damages. Statutes of limitation, which would apply to a court proceeding for my claim, will apply to commencement of arbitration proceedings. If I default on any obligation to a lender in connection with my RV, my lender may exercise all of its rights without regard to this agreement. If I file a claim in court without having first complied with this agreement, I will be required to pay all fees, costs, and expenses, including attorneys' fees, for dismissal or referral to arbitration. This agreement will apply to me, my heirs and assigns, and anyone who purchases or leases my RV from me or operates or occupies it with my permission or without objection by me. Nothing in this agreement enlarges my rights or gives me any rights or claims I would not otherwise have. FOR INFORMATION ABOUT HOW TO FILE A CLAIM OR ABOUT THE ARBITRATION PROGRAM, CALL JAYCO AT 219-825-0608, OR THE AMERICAN ARBITRATION ASSOCIATION AT 800-778-7879.

Revised 3/2001 MLF

SAMPLE

NOTES

SUBSEQUENT OWNER

This card is to be used for the notification
of transfer of ownership only.

If you have submitted the paperwork to transfer warranty,
please do not use this card.

CHANGE OF OWNERSHIP

ATTENTION!

Subsequent Owner

WE NEED YOUR HELP! FEDERAL RECORD KEEPING LAWS REQUIRE THAT WE MAINTAIN A FILE OF OWNERS OF OUR PRODUCT, YOUR COOPERATION IN FILLING OUT THE CARD WILL BE APPRECIATED.

MODEL INFORMATION: YEAR _____ MODEL _____

LENGTH _____ SERIAL NUMBER _____

NEW OWNER INFORMATION PURCHASE DATE _____

NAME _____

ADDRESS _____

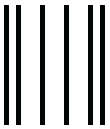
CITY _____ STATE/PROVINCE _____ ZIP _____

PREVIOUS OWNER INFORMATION PURCHASE DATE _____

NAME _____

ADDRESS _____

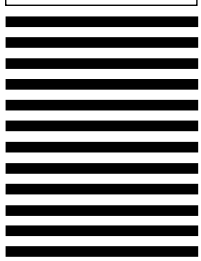
CITY _____ STATE/PROVINCE _____ ZIP _____



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 21 MIDDLEBURY IN

POSTAGE WILL BE PAID BY THE ADDRESSEE



Jayco, Inc.
P.O. Box 460
Middlebury, IN 46540-9904

NOTES

WELCOME TO THE JAYCO FAMILY!

As the owner of a new Jayco recreation vehicle we are proud to welcome you to our growing family.

All Jayco RV homes are built with care, under the watchful eye of our Quality Assurance program. And it is our sincere wish that you will have a lifetime of fun times with your new Jayco.

We are pleased you chose Jayco and want to do everything possible to make sure you stay as happy with your Jayco RV home as you were on the day you bought it.

We work closely with Jayco dealers to provide customer service for you. We honestly feel that Jayco dealers are on the whole the best in the business. And with nearly 300 of them in the U. S. and Canada, you should never be too far from help if you ever need it.

In the months and years to come we hope you will become a close member of the Jayco family. One way to enjoy your Jayco even more is through our owner's club - The Jafari International Travel Club. It is lots of fun and a great way to meet other members of the Jayco family. If you are interested, please talk to your dealer about the "flight" in your area, or write to us directly and we will be in touch.

From Jayco's family to yours: "Welcome Home!"

903 South Main Street • P.O. Box 460 • Middlebury, IN 46540